

The Auditor-General
Audit Report No.27 2012–13
Performance Audit

Administration of the Research Block Grants Program

Department of Industry, Innovation, Climate Change, Science,
Research and Tertiary Education

Australian National Audit Office

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Canberra ACT
8 April 2013

Dear Mr President
Dear Madam Speaker

The Australian National Audit Office has undertaken an independent performance audit in the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit to the Parliament. The report is titled *Administration of the Research Block Grants Program*.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's Homepage—<http://www.anao.gov.au>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian McPhee', is positioned above the printed name and title.

Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office (ANAO). The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act* 1997 to undertake performance audits, financial statement audits and assurance reviews of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Australian Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

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Abbreviations

ACGR	Australian Competitive Grants Register
ANAO	Australian National Audit Office
APA	Australian Post-graduate Awards
CTS	Commercialisation Training Scheme
DIICCSRTE	Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education
DIISRTE	Department of Industry, Innovation, Science, Research and Tertiary Education
ERA	Excellence in Research Australia
HERDAC	Higher Education Research Data Advisory Committee
HERDC	Higher Education Research Data Collection
HESA Act	<i>Higher Education Support Act 2003</i>
HESDC	Higher Education Student Data Collection
IGS	Institutional Grant Scheme
IPRS	International Post-graduate Research Scholarships
JRE	Joint Research Engagement
KPI	Key Performance Indicator
OECD	Organisation for Economic Co-operation and Development
RBG	Research Block Grant
RBGAS	Research Block Grant Allocation System
RIBG	Research Infrastructure Block Grants

RTS	Research Training Scheme
SRE	Sustainable Research Engagement
TWG	Technical Working Group
UA	Universities Australia

Glossary

Australian Competitive Grants	Australian competitive research grants are funding provided on a nationally competitive basis (nationally advertised) and available to all Australian universities for research purposes only.
Block funding	Refers to fixed sum funding provided by the Government for a specific purpose with limited provision regarding how the funds are spent.
Dual Funding Model	A funding model comprising Australian Competitive Grants and Research Block Grants and is used to provide funding support to the higher education sector to undertake research and research training activities.
ERA outcome	A measure of excellence for each university produced as a result of the ERA process.
ERA process	A process administered by the Australian Research Council that provides a direct measure of research excellence in Australian universities.
Higher Education Provider	This term is used in the HESA Act to describe universities eligible for funding under the Act.
Key Performance Indicator(s)	Established to provide information (qualitative or quantitative) on the effectiveness of programs in achieving objectives in support of respective outcomes.
Research Block Grant	A single funding amount provided each year to institutions in accordance with the HESA Act to support research and research education.

Research Income	A data input used to calculate RBG allocations and reported annually by universities as part of the Higher Education Research Data Collection. Comprised of income categories 1–4 corresponding to income from Australian Competitive Grants, other public sector agencies, industry and Cooperative Research Centres.
Transparent Cost process	The transparent cost process is administered by DIISRTE and involves a survey of university staff to quantify the effort of staff directed towards Australian competitive grant research and reporting of data by universities quantifying the indirect cost of Australian competitive grant research. Data collected through this process is used to calculate the Transparent Cost index.
University-specific Performance Index	Used in calculating block grant allocations. Calculated for each university to represent performance relative to other institutions.

Summary and Recommendations

Summary

Introduction

1. The Australian Government (the Government) provides funds to the higher education sector¹ to support research and research training through a dual funding arrangement. This arrangement uses a combination of peer-reviewed competitive grants²—administered primarily through the Australian Research Council and the National Health and Medical Research Council—and a performance-based system for annual block funding³—administered by the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) (since March 2013, the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE)).⁴ The rationale for this approach is that regular block grants underpin competitive grants by providing stable funding for infrastructure, the indirect costs of research and research education.

2. The dual funding model has been maintained by successive governments since 1995, on the basis that access to regular block and competitive research grant funding enables institutions to support and maintain long-term strategic research capability; while also providing flexibility to focus on emerging research. The Government further supports this flexibility by providing RBG recipients with a high degree of freedom in relation to how the funds are spent—within the context of the objectives of each of the six schemes that comprise the RBG program—to achieve a balance between existing and emerging priorities.

¹ The Australian higher education sector comprises universities and other higher education institutions. Higher education institutions include self-accrediting or non self-accrediting providers. The Australian education system comprises: 39 universities of which 37 are public institutions and two are private; one Australian branch of an overseas university; three other self-accrediting higher education institutions; and non self-accrediting higher education providers accredited by State and Territory authorities, numbering more than 150.

² Australian competitive research grants are defined as funding provided on a nationally competitive basis (nationally advertised) and available to all Australian universities for research purposes only.

³ Block funding refers to fixed sum funding provided by the Government for a specific purpose with limited provisions regarding how the funds are spent.

⁴ On 25 March 2013, DIISRTE's responsibilities were expanded to incorporate the former Department of Climate Change and Energy Efficiency and the department was renamed the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE). Throughout this report the department is referred to as DIISRTE; the department's name at the time the audit was being undertaken.

3. In 2012–13, the Government will provide over \$1.7 billion to the higher education sector through Research Block Grants (RBGs).⁵ This funding is distributed via six schemes:

- two schemes supporting research scholarships for students undertaking higher degree by research degrees⁶—Australian Post-graduate Awards and the International Post-graduate Research Scholarships; and,
- four schemes supporting research and research training activities—the Research Training Scheme, the Joint Research Engagement scheme, the Sustainable Research Excellence scheme and the Research Infrastructure Block Grant scheme.

4. Table S 1 describes the six current schemes and their funding for 2012-13.

⁵ Department of Industry, Innovation, Science, Research and Tertiary Education, *Portfolio Budget Statement 2012–13*, DIISRTE, 2012, pp. 61-63.

⁶ Higher degree by research refers to research-based study at the doctorate or masters level.

Table S 1**Research Block Grant schemes and 2012–13 funding**

Research Infrastructure Block Grant	commenced: 1995
\$238 million—supports universities in meeting the indirect costs of their competitive grant research activities. Funding is based on each university's reported competitive grant income.	
Research Training Scheme	commenced: 2002
\$668 million—provides support for the research training of domestic students undertaking doctorate or masters degree by research. Funding formula emphasises student completions (50 per cent), research income (40 per cent) and publications (10 per cent).	
International Post-graduate Research Scholarships ^(a)	commenced: 2002
\$22 million—supports research excellence and research effort in Australia by attracting top quality international research students to areas of research strength in Australian institutions. Funding covers tuition fees and health care costs for the recipient.	
Australian Post-graduate Awards ^(b)	commenced: 2002
\$260 million—supports post-graduate research by providing financial support to post-graduate students of exceptional research promise undertaking doctorate or masters degree by research at an Australian institution. APAs assist with student general living costs.	
Joint Research Engagement	commenced: 2010
\$352 million—places emphasis on collaboration between universities, industry and end-users. Funding is based on non-competitive grant research income (60 per cent), publications (10 per cent) and student load (30 per cent).	
Sustainable Research Excellence	commenced: 2010
\$170 million—supports universities in meeting the indirect costs of their competitive grant research activities. In addition, it supports sustainable research excellence through the implementation of best practice financial management, performance and reporting frameworks.	

Source: ANAO Analysis.

Notes: (a) Implemented in 1990 as the Overseas Post-graduate Research Scholarships, with the current funding allocation formula commencing in 2002. This scheme was brought under the umbrella of the Research Block Grant program in 2008.

(b) Implemented in 1995, with the current funding allocation formula commencing in 2002.

Higher education sector reform

5. When the RBGs commenced in 1995, they were designed to provide funding to support the indirect costs of competitive grant research. However, as the program has evolved, new schemes have broadened this focus to more directly target other government priorities, including research excellence, collaboration, research education and the implementation by universities of best practice financial management, performance and reporting frameworks.

6. More recently, this change in focus has been driven by reforms of the higher education and innovation sectors announced in May 2009 as part of the

Australian Government's policy paper *Powering Ideas*.⁷ Supporting these reforms, the Government announced a \$5.7 billion investment over four years as part of the 2009–10 Budget.

7. For the higher education sector, the reforms included initiatives to improve research skills, expand research capacity and increase both domestic and international collaboration. Changes for the RBG program included \$512 million between 2009–10 and 2012–13⁸ for the new Sustainable Research Excellence scheme to compensate universities for the indirect costs of their Australian competitive grant research, and to support universities to build and maintain research excellence. To further emphasise research excellence and the need to increase the number of research groups performing at world-class levels, the Government also provided additional funding to progress the Excellence in Research Australia (ERA) initiative being administered by the Australian Research Council.⁹ Outcomes from the ERA process are key inputs to the Sustainable Research Excellence scheme's funding methodology.

8. The Joint Research Engagement scheme was introduced to reward universities that diversify their sources of research income.¹⁰ In announcing the Joint Research Engagement scheme the Government noted as a priority its aim to double the level of collaboration between Australian business, universities and publicly funded research agencies over the next decade.¹¹ The Joint Research Engagement scheme advances this aim through a funding methodology that emphasises each university's success in obtaining research income from sources other than Australian competitive grants.

9. In response to an identified need to grow the number of people completing higher degree by research qualifications, *Powering Ideas* announced a doubling of the number of Australian post-graduate awards by 2012 and a

⁷ *Powering Ideas* responded to recommendations stemming from a review commissioned by the Government in January 2008 to identify and recommend solutions to gaps in the national innovation system. This review was known as the Cutler Review.

⁸ This funding was revised as part of the Government's 2012–13 Mid-year Economic and Fiscal Outlook, with the timeframe for reaching the maximum level of funding extended to 2016–17.

⁹ ERA provides a direct measure of research excellence in Australian universities, allowing for comparison of Australia's research nationally and internationally, and for identification of areas of research strength and opportunities for development. ERA enables the Government to link funding to performance based upon research excellence. ERA outcomes are currently being used as a key measure to inform the allocation of funding to support the indirect costs of research through the RBG program's Sustainable Research Excellence scheme.

¹⁰ The Infrastructure Grants Scheme ceased in December 2009 with funding re-directed to the Joint Research Engagement scheme commencing in January 2010.

¹¹ Australian Government, *Powering Ideas: An Innovation Agenda for the 21st Century*, Commonwealth of Australia, Canberra, 2009, p. 8.

corresponding increase in the award stipend rate, with continued indexation in following years.

10. Through *Powering Ideas*, the Government also sought to implement governance arrangements to provide for improved coordination, alignment to its priorities and the measurement of performance. Addressing this aim, the Government announced the introduction of mission-based compacts with universities to provide a framework for jointly achieving the reform objectives. Mission-based compacts covering the period 2011–13 have been negotiated with each university.

11. These reforms have increased the level of funding distributed through the RBG program and placed greater emphasis on the RBGs as a mechanism for allocating funds. The reforms have also resulted in a more integrated suite of block grant schemes and the establishment of linkages between the RBG program and complementary initiatives such as the ERA process and the mission-based compact framework.

Calculating Research Block Grants

12. Each year, through the RBG program, the Government provides universities with guaranteed annual block grant funding based on each university's relative performance against the Government's research and research training priorities.

13. Funding allocations are determined using scheme specific formulas to calculate a performance index for each university. The performance index is then multiplied by the scheme's funding pool, or in the case of the Australian Post-graduate Awards and International Post-graduate Research Scholarships, by the total number of awards available, to determine the funding allocations for each university.¹²

14. It is through the scheme formulas that the Government emphasises and rewards specific behaviours and outcomes in line with its policy objectives. This is achieved by adding or removing data inputs from the scheme formulas, or changing the proportion the data inputs contribute to each scheme. The data inputs to the formulas are reported by universities at the end of each financial year. Data reported by universities at the end of June reflects activity for the

¹² Calculation of the Australian Post-graduate Awards and International Post-graduate Research Scholarships allocations also considers the number of continuing students already receiving these scholarships.

previous calendar year in which they are reported and this data is used as the basis for calculating funding for the following calendar year. For example, data reported for the 2011 calendar year in June 2012 will be used to calculate funding allocations for 2013. Funds are distributed across 23 fortnightly payments commencing in January each year.¹³

Relevant legislation

15. The *Higher Education Support Act 2003* (HESA Act) provides the legislative basis for the RBG program. The HESA Act provides for the Commonwealth to give financial support for higher education and certain vocational education and training. The Commonwealth does this through grants and other payments to higher education providers; and through financial assistance to students.¹⁴

16. Under the HESA Act, an institution must be approved by the relevant Minister—currently the Minister for Tertiary Education, Skills, Science and Research (the Minister)—as a higher education provider before it can receive grants, or its students can receive assistance. The HESA Act currently lists 41 institutions as higher education providers.

17. Funding for the RBG program is provided through a Special Appropriation 'limited by amount'. Maximum amounts are determined by the Minister through a legislative instrument.¹⁵ The funding pools for each scheme are fixed and cannot exceed these amounts.

Audit objective, criteria and scope

18. The audit objective was to assess the effectiveness of DIISRTE's administration of the Research Block Grant schemes. The department's performance was assessed against the following criteria:

- the schemes are effectively planned and administered;

¹³ For 2012, Sustainable Research Excellence Threshold 2 payments were made separately in two lump-sum payments during the year.

¹⁴ While referred to as 'grants', the RBG schemes are not classified as grants under the Australian Government's financial management framework and are specifically excluded from the application of the *Commonwealth Grant Guidelines*. Regulation 3A(2)(k) of the *Financial Management and Accountability Regulations 1997* (FMA Regulations) stipulates that payments made for the purposes of the HESA Act are not grants for the purposes of the FMA Regulations.

¹⁵ As a result of the *Higher Education Support Amendment (Maximum Payment Amounts and Other Measures) Act 2012*, maximum amounts are now determined by the Minister through a legislative instrument, rather than being set out in the legislation.

- the processes and systems used for calculating and distributing funds reflect the allocation criteria specified for each scheme; and
- compliance with scheme guidelines is monitored and scheme performance and contribution to the broader goals of the RBG program is assessed.

19. The audit scope focused on the implementation of the Sustainable Research Excellence and Joint Research Engagement schemes, which were introduced as part of the reforms of the higher education sector announced in the 2009–10 Budget. The audit also considered the broader administrative processes supporting the RBG schemes, such as funding calculations, evaluations and reviews.

Overall conclusion

20. The Australian Government provides funds to the higher education sector to support research and research training through a dual funding arrangement. This arrangement combines a performance-based system for annual block funding, known as Research Block Grants (RBGs), and peer-reviewed competitive grants. In 2012–13, the Government will provide over \$1.7 billion to universities through the RBGs. This money is distributed through six schemes using scheme specific formulas that allocate funds based on each university's relative performance against the Government's research and research training priorities.

21. The RBG schemes make up a mature program that has been in operation since 1995. Reflecting this maturity, DIISRTE has in place many well established practices which support the effective administration of the program. The processes for calculating and allocating funds are generally effective and are underpinned by internal procedures and systems that are designed to provide for the correct and timely distribution of funds. DIISRTE's practices also contributed to the department's effective management of initiatives announced by the Government in the 2009–10 Budget as part of its reform of the higher education sector. In particular, DIISRTE's implementation of the new Sustainable Research Excellence and Joint Research Engagement schemes leveraged established elements of the RBG program, reducing risk associated with their implementation and contributing to the achievement of the Government's commitments within the timeframes it had announced.

22. Coinciding with the increased focus on the RBG program as a result of these recent initiatives, DIISRTE has undertaken a number of reviews aimed at

examining identified issues and improving components of the funding methodology. These reviews have been important in addressing technical issues and providing confidence that funding is being allocated on a sound basis. However, there remain opportunities for DIISRTE to further improve key elements of the program. In particular, to improve the quality assurance of data inputs to the scheme formulas and the monitoring and reporting of scheme outcomes against their objectives.

23. As a key determinant of the funding allocations, DIISRTE places importance on the quality of data reported by universities through analysis of data issues, refinement of the data specifications, and quality assurance checks. Notwithstanding this focus, DIISRTE lacks a strategy that describes how the various data quality activities deliver against the department's quality assurance objectives. As a result, some gaps exist in the department's approach to data quality assurance, particularly in relation to the timely identification and resolution of misreporting and reporting errors. In addition, there are currently no defined quantitative thresholds to guide staff in determining the materiality of identified data quality issues and the appropriate course of action to address these.

24. DIISRTE's quality assurance activities have improved the quality of data being reported by universities; however, there is scope for DIISRTE to develop an overarching data quality strategy. This is particularly important in view of the level of funding distributed through the RBGs and the focus on the RBGs as a fair mechanism for allocating funds in line with the Government's policy objectives. A quality assurance strategy would facilitate a more systematic approach to data integrity and the consistent treatment of data quality issues. A data quality strategy could also bring within its scope reviews that focus on technical issues and allow these to be managed as part of a broader quality assurance program.

25. Since 2009, reviews undertaken by DIISRTE have focused on the analysis of technical issues, with only limited analysis of scheme achievements against their objectives. Managing reviews of technical issues distinct from reviews that focus on the outcomes of the schemes would enable DIISRTE to achieve a better balance in the reviews it undertakes each year. It would also assist the department to ensure that the design and management of these reviews reflect their purpose.

26. The limited analysis of scheme achievements is also reflected in the RBG program's key performance indicators, which currently focus on

measuring the achievement of operational outcomes, rather than policy objectives. There is scope for DIISRTE to improve its monitoring and reporting framework to ensure greater balance between operational and policy objectives and in doing so, provide an information base on which the success of the schemes in achieving the Government's policy objectives can be monitored and reported. Insights from this analysis would also provide an evidence base upon which to recommend changes to the RBG schemes in order to maintain alignment between the scheme objectives and the scheme outcomes. Fundamental to this work will be examination of the existing objectives statements for the schemes to ensure they reflect the Government's goals.

27. Importantly, an enhanced performance monitoring and reporting framework would contribute to the Government's reform aspirations for the higher education sector relating to improved governance arrangements, better coordination and collaboration, alignment to priorities and the measurement of performance. In support of these objectives, the Government announced a number of initiatives in its policy paper, *Powering Ideas*, including: the Sustainable Research Excellence scheme, negotiation of mission-based compacts and further development of the ERA process. With these initiatives now in place, there has been a significant broadening of the information base from which DIISRTE could frame its analysis and measure outcomes for the RBG schemes.

28. The ANAO has made two recommendations aimed at assisting the department to: consolidate data quality activities under a quality assurance strategy; and monitor and report on the performance of the RBG schemes.

Key findings

Program design (Chapter 2)

29. DIISRTE effectively implemented the Sustainable Research Excellence and Joint Research Engagement schemes. Key deliverables and deadlines were achieved in accordance with both the Government's commitments and the established timeframes.

30. In particular, DIISRTE's implementation of the schemes was well planned, allowing for the iterative development of key components of the funding methodologies. This work was supported by consultation and communications activities aimed at both providing information and obtaining feedback at key points. Nevertheless, there was no formal risk management framework or process associated with the implementation of these schemes.

While high-level risks were incorporated in the department's broader corporate risk management reporting, this did not directly support the day-to-day implementation task and associated risks. That said, the practical actions taken by DIISRTE indicated an awareness of key risks and steps were taken to manage and mitigate these.

31. For any future significant changes to the program there would be benefit in DIISRTE adopting a documented risk management approach. Such an approach would provide the department with greater visibility of the risks and improve its ability to monitor their management.

Funds allocation and distribution (Chapter 3)

32. DIISRTE's process for allocating and distributing funds is generally effective and is underpinned by internal procedures for authorising and approving the allocations. The distribution of funds is well supported by internal processes for ensuring the timeliness and accuracy of fortnightly payments. The information and computer technology that underpins the allocation and distribution of funds is fit-for-purpose, well documented and is supported within the department's information and communications technology (ICT) environment.

33. DIISRTE's approach to data quality assurance could be improved. While the department has in place quality assurance activities it does not have an overarching data quality strategy which outlines the objectives and how the various activities contribute collectively towards these. As a result there are gaps in the activities associated with identifying and addressing misreporting and reporting errors. There are also no defined quantitative thresholds, or tolerance levels to assist in determining the materiality of identified data quality issues and the appropriate course of action to address these.

Review and evaluation (Chapter 4)

34. Since 2009, DIISRTE has undertaken a number of reviews which have been important in addressing technical issues and providing confidence that funding is being allocated accurately. However, these reviews have generally involved only limited analysis of scheme achievements against their objectives. This limited focus is also reflected in the program's key performance indicators, which focus on measuring operational outcomes, such as the accurate and timely provision of funds to universities, without complementary measures related to the policy objectives.

35. RBGs are a key mechanism for providing funding to the higher education sector, and measuring the direct impact of this funding can be challenging. However, with \$1.7 billion in funding to be provided during 2012–13, there is scope for DIISRTE to improve its monitoring and reporting framework to incorporate a more outcomes focused approach. Fundamental to developing a framework will be the establishment of an information base from which to monitor and report on the success of the schemes in achieving the Government’s policy objectives. Progress has been made in this area, in particular, through development of the mission-based compacts to define performance measures and universities’ individual missions, the development of ERA outcomes to provide a measure of the excellence of research activity, and the implementation of the Sustainable Research Excellence scheme to facilitate visibility of the indirect costs of research. Collectively, these and other information sources provide a basis from which to develop indicators and to measure performance.

36. A performance monitoring and reporting framework which has a balance of operational and policy measures will both increase transparency for stakeholders and assist the department to advise government on the impact of the RBGs. A balanced framework would focus on how RBGs are contributing to the Government’s reform aspirations for the higher education sector relating to improved governance arrangements, better coordination and collaboration, achieving an alignment between scheme objectives, scheme outcomes and government priorities, and measuring performance.

Summary of agency response

37. DIISRTE's summary response is provided below, while the full response is provided at Appendix 1.

The Department welcomes the ANAO's assessment that the Research Block Grants Program (RBG) is generally being administered effectively and that it has effectively managed the implementation of new component schemes of the RBG within the expected timeframes.

The Department agrees with the ANAO recommendations to develop an overarching data quality strategy for the program and to develop more outcome-focused performance indicators.

The Department has commenced work on developing and documenting new and enhanced data handling and control measures for the strategy and expects to have the complete strategy fully implemented later in 2013.

The Department notes that there are inherent difficulties in identifying outcomes that are directly attributable to support programs such as the RBG, so will examine possible systemic performance indicators, especially in relation to research quality and research impact. However, it is not yet clear whether widely accepted, robust measures on quality and impact will be available for use in the near term.

Recommendations

Recommendation No. 1

Para 3.21

To facilitate a more systematic approach to data integrity and maintain confidence in the Research Block Grant (RBG) program, the ANAO recommends that DIICCSRTE develop an overarching data quality strategy for the program.

DIISRTE's response: *Agreed*

Recommendation No. 2

Para 4.55

To assist DIICCSRTE monitor and report on the performance of the RBG program and its component schemes, the ANAO recommends that the department develop outcome focused indicators designed to measure performance in terms of the overall program and scheme specific objectives.

DIISRTE's response: *Agreed*

Audit Findings

1. Introduction

This chapter provides background information on the Research Block Grant program. It also outlines the audit approach including the rationale for the audit and its objective, scope and methodology.

Background

1.1 The Australian Government distributes funds to the higher education sector¹⁶ for research and research training through a dual funding arrangement with a combination of peer-reviewed competitive grants¹⁷—primarily administered through the Australian Research Council and the National Health and Medical Research Council—and a performance-based system for regular block funding¹⁸—administered by the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) (since March 2013, the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE)).¹⁹ The rationale for this approach is that regular block grants underpin competitive grants by providing stable funding for infrastructure, the indirect costs of research and research education.

1.2 The dual funding model has been maintained by successive governments since 1995, on the basis that access to block and competitive research grant funding enables institutions to support and maintain long-term strategic research capability; while also providing flexibility to focus on emerging research areas. The Government further supports this flexibility by providing recipients with a high degree of freedom in relation to how they spend the funds—within the context of the objectives of each of the six

¹⁶ The Australian higher education sector comprises universities and other higher education institutions. Higher education institutions include self-accrediting or non self-accrediting providers. The Australian education system comprises: 39 universities of which 37 are public institutions and two are private; one Australian branch of an overseas university; three other self-accrediting higher education institutions; and more than 150 non self-accrediting higher education providers accredited by State and Territory authorities.

¹⁷ Australian competitive research grants are defined as funding provided on a nationally competitive basis (nationally advertised) and available to all Australian universities for research purposes only.

¹⁸ Block funding refers to fixed sum funding provided by the Government for a specific purpose with limited provisions regarding how the funds are spent.

¹⁹ On 25 March 2013, DIISRTE's responsibilities were expanded to incorporate the former Department of Climate Change and Energy Efficiency and the department was renamed the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE). Throughout this report the department is referred to as DIISRTE; the department's name at the time the audit was being undertaken.

schemes that comprise the RBG program—to achieve a balance between existing and emerging priorities.

1.3 In 2012–13, the Government will provide over \$1.7 billion to the higher education sector in the form of block grants through the Research Block Grant (RBG) program.²⁰ This funding is distributed via six schemes:

- two schemes supporting research scholarships for students undertaking higher degree by research degrees²¹—Australian Post-graduate Awards (APA) and the International Post-graduate Research Scholarships (IPRS); and,
- four schemes supporting research and research training activities—the Research Training Scheme (RTS), the Joint Research Engagement (JRE) scheme, the Sustainable Research Excellence (SRE) scheme and the Research Infrastructure Block Grant (RIBG) scheme.

1.4 Table 1.1 describes the six current schemes and their funding for 2012–13. Figure 1.1 shows a breakdown of total funding across all schemes in existence since 2002, including the Institutional Grant Scheme (IGS) and the Commercialisation Training Scheme (CTS), which ceased in 2009 and 2011, respectively.

²⁰ Department of Industry, Innovation, Science, Research and Tertiary Education, *Portfolio Budget Statement 2012–13*, DIISRTE, 2012, pp. 61–63.

²¹ Higher degree by research refers to research-based study at the doctorate or masters level.

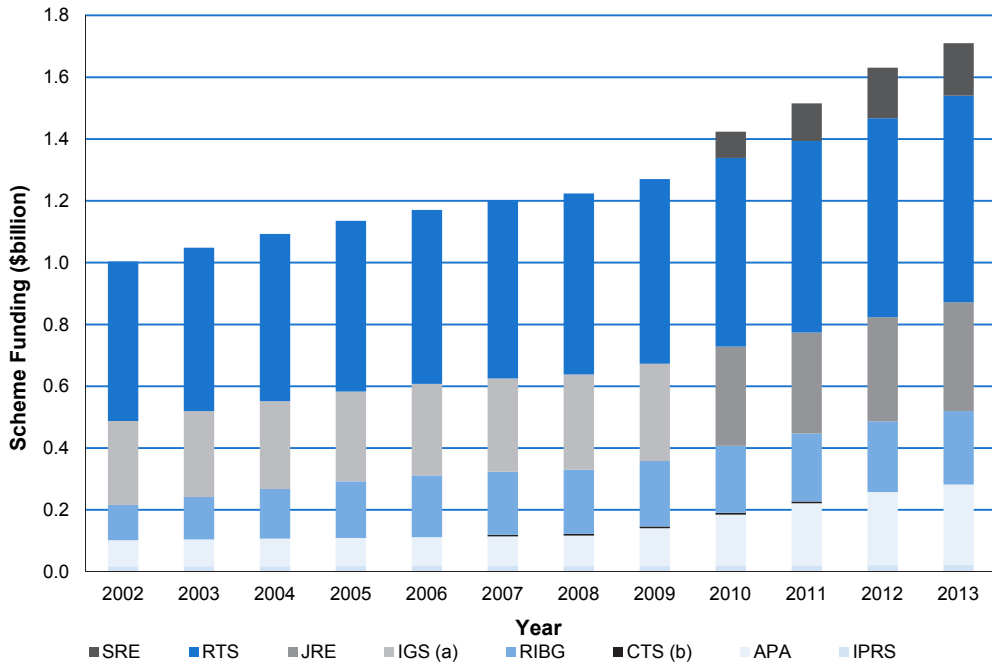
Table 1.1**Current Research Block Grant schemes and 2012–13 funding**

Research Infrastructure Block Grant (RIBG)	commenced: 1995
\$238 million—supports universities in meeting the indirect costs of their competitive grant research activities. Funding is based on each university's reported competitive grant income.	
Research Training Scheme (RTS)	commenced: 2002
\$668 million—provides support for the research training of domestic students undertaking doctorate or masters degree by research. Funding formula emphasises student completions (50 per cent), research income (40 per cent) and publications (10 per cent).	
International Post-graduate Research Scholarships (IPRS) ^(a)	commenced: 2002
\$22 million—supports research excellence and research effort in Australia by attracting top quality international research students to areas of research strength in Australian institutions. Funding covers tuition fees and health care costs for the recipient.	
Australian Post-graduate Awards (APA) ^(b)	commenced: 2002
\$260 million—supports post-graduate research by providing financial support to post-graduate students of exceptional research promise undertaking doctorate or masters degree by research at an Australian institution. APAs assist with student general living costs.	
Joint Research Engagement (JRE)	commenced: 2010
\$352 million—places emphasis on collaboration between universities, industry and end-users. Funding is based on non-competitive grant research income (60 per cent), publications (10 per cent) and student load (30 per cent).	
Sustainable Research Excellence (SRE)	commenced: 2010
\$170 million—supports universities in meeting the indirect costs of their competitive grant research activities. In addition, it supports sustainable research excellence through the implementation of best practice financial management, performance and reporting frameworks.	

Source: ANAO Analysis.

Notes: (a) Implemented in 1990 as the Overseas Post-graduate Research Scholarships, with the current funding allocation formula commencing in 2002. This scheme was brought under the umbrella of the Research Block Grant program in 2008.

(b) Implemented in 1995, with the current funding allocation formula commencing in 2002.

Figure 1.1**Research Block Grant funding by scheme**

Source: ANAO analysis.

Notes: (a) The IGS ceased in December 2009 with funding re-directed to the JRE scheme, which commenced in January 2010.

(b) The CTS was introduced in 2007 to provide 250 higher degree by research students each year with skills to bring research-based ideas to market. Funding ceased in December 2011.

Legislative and policy environment

Relevant legislation

1.5 The *Higher Education Support Act 2003* (HESA Act) provides the legislative basis for the RBG program. The HESA Act provides for the Commonwealth to give financial support for higher education and certain vocational education and training. The Commonwealth does this through grants and other payments to higher education providers; and through financial assistance to students.²²

²² While referred to as 'grants', Regulation 3A(2)(k) of the *Financial Management and Accountability Regulations 1997* (FMA Regulations) stipulates that payments made for the purposes of the HESA Act are not grants and, therefore, are specifically excluded from the application of the *Commonwealth Grant Guidelines*.

1.6 An institution has to be approved by the Minister for Tertiary Education, Skills, Science and Research (the Minister) as a higher education provider before it can receive grants, or its students can receive assistance. To be considered for approval, institutions must be registered higher education providers and meet certain criteria specified in the HESA Act, although the Minister may exempt a body corporate from these requirements. The HESA Act currently lists 41 institutions as higher education providers.

1.7 Funding for the RBG program is provided through a Special Appropriation 'limited by amount'. Maximum amounts are determined by the Minister through a legislative instrument.²³ The funding pools for each scheme are fixed and cannot exceed these amounts.

1.8 The HESA Act provides for subordinate legislation in the form of guidelines. The guidelines provide the legal basis for the Government to administer and expend grants to support research and research training under the HESA Act. Separate guidelines are prepared for 'other grants' and for 'Commonwealth scholarships' and provide a description and a statement of objectives.²⁴ The guidelines are reviewed annually to take account of any policy changes and, where amendments are required these must be agreed by the Minister and pass through each House of Parliament as legislative instruments.

Policy environment

1.9 When the RBG program commenced in 1995, its primary purpose was to provide funding to support the indirect costs of competitive grant research. However, as the program has evolved, new schemes have broadened this focus to more directly target other government priorities, including research excellence, collaboration, research education and the implementation by universities of best practice financial management, performance and reporting frameworks.

1.10 More recently, this change in focus has been driven by reforms announced in May 2009 as part of the Government's policy paper *Powering Ideas*. *Powering Ideas* responded to recommendations stemming from a review

²³ As a result of the *Higher Education Support Amendment (Maximum Payment Amounts and Other Measures) Act 2012*, maximum amounts are now determined by the Minister through a legislative instrument, rather than set in the legislation.

²⁴ The Other Grant guidelines cover the RIBG, RTS, JRE and SRE schemes and the Commonwealth Scholarship guidelines cover the APA and IPRS schemes.

commissioned by the Government in January 2008 to identify and recommend solutions to gaps in the national innovation system. This review was known as the Cutler Review. In *Powering Ideas* the Government affirmed the significance of innovation as the key to making Australia more productive and competitive and emphasised the importance of the role of universities. The Government also acknowledged deficiencies in the state of universities, noting that reform was needed to ensure that universities were competitive and able to demonstrate consistent excellence in everything they do.²⁵

1.11 *Powering Ideas* announced a number of initiatives to reform the higher education and innovation sectors as part of a \$5.7 billion investment over four years announced in the 2009–10 Budget. For the higher education sector, the reforms included initiatives to improve research skills, expand research capacity and increase both domestic and international collaboration. The Government also sought to implement improved governance arrangements to provide for improved coordination, alignment to priorities and measurement of performance.

1.12 A key issue identified by the Cutler Review was the gap between the funding targeted to research and the actual cost of that research. This issue was also highlighted in the Government's 2008 Review of Australian Higher Education—known as the Bradley Review. In its final report, released in December 2008, the Bradley Review recommended an increase in the funding allocation for the RBGs by about \$300 million per year, representing an increase from about 20 cents to 50 cents in the dollar for each dollar provided through competitive grants.²⁶

1.13 Responding to this issue, the Government announced the SRE scheme, committing \$512 million between 2009–10 and 2012–13 (out of the total investment of \$5.7 billion), with funding progressively increasing over this period to, on average, around 50 cents for each dollar of Australian competitive grant funding received by universities.²⁷ This funding was revised as part of the Government's 2012–13 Mid-year Economic and Fiscal Outlook

²⁵ Australian Government, *Powering Ideas*, op. cit., p. 32.

²⁶ Australian Government, *Review of Australian Higher Education*, Commonwealth of Australia, Canberra, 2008, p. 83.

²⁷ In a 2008 report prepared for the Department of Innovation, Industry, Science and Research, the Allen Consulting Group compared experience across a range of countries and reported that the international benchmark for funding indirect costs of research projects was 50 per cent of the value of the original grant.

(MYEFO), with the timeframe for reaching the maximum level of funding extended to 2016–17.

1.14 Of further concern to the Government during this time was the low level of collaboration between universities and industry—Australia ranked last in the OECD on collaboration for innovation between firms and higher education institutions.²⁸ The Government identified a number of initiatives and research funding programs to reward collaboration and knowledge exchange between institutions and industry-based research groups. This included a new block grant scheme, the JRE scheme, with funding to be redirected from the existing IGS scheme from January 2010.

1.15 The Cutler and Bradley reviews also identified a need to increase the number of people completing higher degree by research qualifications to help ensure a sufficient number of well-qualified academics for teaching and research in universities in the future. Both reviews pointed to the low level of income support available to students as one factor behind the difficulty in attracting the best students to undertake research training, and recommended increasing the APA stipend rate. The Government responded to this recommendation by announcing a 10 per cent increase in the award stipend rate from 2010, with continued indexation in following years. The Government also announced a doubling of the number of APA awards by 2012, starting with 1000 new places in 2009.²⁹

1.16 *Powering Ideas* also prioritised support for high-quality research and increasing the number of research groups performing at world-class levels. To this end, in the 2009–10 Budget, the Government allocated additional funding of \$35.8 million over four years to progress the Excellence in Research Australia (ERA) initiative being administered by the Australian Research Council. This initiative commenced in 2008, with the first full ERA process completed in 2010 and another full round conducted in 2012.

1.17 ERA provides a direct measure of research excellence in Australian universities, allowing for comparison of Australia's research nationally and internationally, and for identification of areas of research strength and opportunities for development. ERA enables the Government to link funding to performance based upon research excellence. ERA outcomes are currently

²⁸ Australian Government, *Powering Ideas*, op. cit., p. 20.

²⁹ *ibid.*, p. 37.

being used as a key measure of excellence to inform the allocation of funding to support the indirect costs of research through the RBG program's SRE scheme.

1.18 The Government also announced the introduction of mission-based compacts with universities to provide a framework for jointly achieving the Government's reform objective. Mission-based compacts have since been legislated through amendments to the HESA Act, and compacts covering the period 2011–13 have been negotiated with each university.

Calculating Research Block Grants

1.19 Each year, through the RBG program, the Government provides universities with guaranteed annual block grant funding based on each university's relative performance against the Government's research and research training priorities.

1.20 Funding allocations within each scheme are determined using scheme specific formulas to calculate a performance index for each university. The performance index is then multiplied by the scheme's funding pool, or in the case of the APA and IPRS schemes, by the total number of awards available,³⁰ to generate the funding allocations for each university.

1.21 It is through the scheme formulas that the Government emphasises and rewards specific behaviours and outcomes in order to meet its policy objectives. For example, the aim of the RIBG scheme is to support the indirect cost of competitive grant research activity. Accordingly, distribution of RIBG funds is based solely on the amount of Australian competitive grant income reported by universities.

1.22 Similarly, to place greater emphasis on collaboration between universities, industry and end-users, the Government replaced the IGS scheme with the JRE scheme. The JRE scheme uses the same funding formula as the IGS scheme; however to achieve this change in emphasis, the JRE formula does not include Australian competitive grant research income. It focuses instead on income from other sources, including industry, other public sector organisations and Cooperative Research Centres.

1.23 The formulas for each RBG scheme are shown in Table 1.2.

³⁰ Calculation of the APA and IPRS allocations also considers the number of continuing students already receiving APA and/or IPRS scholarships.

Table 1.2**Scheme formulas**

Scheme	Key data inputs				
	Research income		Research publications	Higher degree by research completions	Higher degree by research load
	Category	%	%	%	%
Research Infrastructure Block Grant	1	100			
Sustainable Research Excellence	1	100			
Joint Research Engagement	2,3,4	60	10		30
Research Training Scheme	All	40	10	50	
Australian Post-graduate Awards	All	40	10	50	
International Post-graduate Research Scholarships	All	40	10	50	
Data input definitions (refer to Figure 1.2 for a description of the key data inputs and their weightings)					
Research income	Research income is income that is provided specifically to undertake or support research. Research income is classified into four categories based upon its source.				
Research publications	Research publications are defined as any book, book chapter, journal article or conference publication that complies with the department's definition of research.				
Higher degree by research completions	Refers to the higher degree by research (masters or doctorate) completions, classified according to the level and cost of the completed post-graduate course.				
Higher degree by research load	Refers to the Research Training Scheme funded post-graduate research student load, classified according to the cost of the course.				

Source: ANAO analysis.

1.24 Until the introduction of the SRE scheme in 2010, data inputs to the scheme formulas were limited to research income, research publications, higher degree research student load and higher degree research student completions. The data inputs to these formulas are reported by universities as part of the Higher Education Research Data Collection (HERDC) and Higher Education Student Data Collection (HESDC) at the end of each financial year. Both data collections are administered by DIISRTE. Implementation of the SRE scheme resulted in the introduction of new data inputs, including ERA

outcomes, staff activity data and financial data relating to the indirect cost associated with Australian competitive grant research.

1.25 As shown in Table 1.2, the SRE scheme shares a formula similar to the RIBG scheme, with funding based solely on the amount of Australian competitive grant research income. This reflects their common aim to support the indirect costs of Australian competitive grant research activities. However, the methodology for calculating SRE allocations is more complex due to the SRE scheme's additional aim to support universities to build and maintain research excellence through the implementation of best practice financial management, performance and reporting frameworks.

1.26 The SRE scheme targets its dual objectives through the three elements of its funding allocation formula. Each element has a funding amount set as a percentage of the SRE total funding for the grant year, as follows:

- SRE Base (20 per cent);
- SRE Threshold 1 (13 per cent); and
- SRE Threshold 2 (67 per cent).

1.27 SRE Base funding is available to all universities. SRE Threshold 1 and SRE Threshold 2 funding is only available to universities that agree to participate in the Australian Research Council's ERA process and DIISRTE's transparent cost process. The transparent cost process is administered by DIISRTE and involves a survey of university staff to quantify the effort of staff directed towards Australian competitive grant research and reporting of data by universities quantifying the indirect cost of Australian competitive grant research. Data collected through this process is used to calculate the Transparent Cost index.

1.28 SRE Threshold 1 funding is distributed based on the relative share of Australian competitive grant research income less than, or equal to \$2.5 million. Threshold 2 funding is distributed based on the relative share of Australian competitive grant research income greater than \$2.5 million. In allocating Threshold 2 funding the aim is to measure not only the quantity of Australian competitive grant research undertaken, but the relative cost of the research and the quality, or excellence, of that research. This is achieved by moderating each university's relative share of Threshold 2 funding using an ERA index and a Transparent Cost index.

1.29 The ERA index recognises research excellence and is calculated using output from the Australian Research Council's ERA process which provides a

rating of research quality, referred to as an ERA outcome. The Transparent Cost index recognises the differences in the indirect cost of research between universities and is calculated using data collected as part of the transparent cost process.

1.30 Figure 1.2 provides a description of all data inputs to the RBG formulas.

Figure 1.2
Data inputs

Research income	
Category 1 Australian competitive grants research income, including grants awarded by the Australian Research Council and the National Health and Medical Research Council.	Category 2 Other public sector research income, including money provided by non-competitive grants, the states, and other public sector organisations.
Category 3 Industry and other research income, including non-government grants and donations for research received from business.	Category 4 Cooperative Research Centres research income, including income derived from grants contributing to Cooperative Research Centres.
<ul style="list-style-type: none"> • Research income categories are unweighted. • Data is collected as part of the HERDC. • Data is averaged over the two most recent years they are available. 	
Publications	
Categories <ul style="list-style-type: none"> • Books • Book chapters • Journal articles • Conference papers 	<ul style="list-style-type: none"> • Books are weighted by a factor of five. • Other publication categories are unweighted. • Data is collected as part of the HERDC. • Data is averaged over two most recent years.
Higher degree by research student completions	
<ul style="list-style-type: none"> • Reports student completions for higher degree by research courses. • Data is weighted by level of course and for Research Training Scheme, also by course cost. • Data is collected as part of the HESDC and averaged over the two most recent years they are available. 	
Higher degree by research student load	
<ul style="list-style-type: none"> • Reports number of Research Training Scheme funded students. • Data is weighted by course cost (high or low). • Data is collected as part of the HESDC and only the most recent year available is used. 	
Excellence in Research for Australia outcomes	
<ul style="list-style-type: none"> • An assessment of each university's research excellence. • Used to calculate the ERA index to moderate SRE Threshold 2 funding excellence across the full spectrum of research performance. • ERA 2010 data was used for 2012 funding allocations. For 2013 onwards, ERA 2012 data will be applied. 	
Staff activity directed to Australian competitive grant research	
<ul style="list-style-type: none"> • Reports effort of staff directed towards Australian competitive grant research. • Used to calculate the Transparent Cost index to moderate SRE Threshold 2 funding to recognise differences in the indirect cost of research between universities. • Data is collected as part of the Research Hours Data Collection administered by DIISRTE. 	
Indirect costs of Australian competitive grant research	
<ul style="list-style-type: none"> • Reports indirect financial costs associated with Australian competitive grant research. • Used to calculate the Transparent Cost index to moderate SRE Threshold 2 funding to recognise differences in the indirect cost of research between universities. • Data is collected as part of the Indirect Costs Financial Return. 	

Source: ANAO analysis of DIISRTE documentation.

Audit approach

Audit objective, criteria and scope

1.31 The audit objective was to assess the effectiveness of DIISRTE's administration of the Research Block Grant schemes.³¹ The department's performance was assessed against the following criteria:

- the schemes are effectively planned and administered;
- the processes and systems used for calculating and distributing funds reflect the allocation criteria specified for each scheme; and
- compliance with scheme guidelines is monitored and scheme performance and contribution to the broader goals of the RBG program is assessed.

1.32 The audit scope focused on the implementation of the SRE and JRE schemes, which were introduced as part of the reforms of the higher education sector announced in the 2009–10 Budget. The audit also considered the broader administrative processes supporting all RBG schemes, such as funding calculations and evaluations and reviews.

Audit methodology

1.33 The ANAO:

- reviewed DIISRTE documentation, including policy documents, ministerial correspondence, evaluation reports, guidelines, procedures, operational documents and reports;
- examined the information and communications technology (ICT) used to calculate and distribute funds;
- interviewed DIISRTE staff; and
- interviewed stakeholders—including face-to-face and by telephone—from a selection of universities and affiliations.

1.34 The audit was conducted in accordance with the ANAO's auditing standards at a cost to the ANAO of approximately \$329 000.

³¹ The JRE Grant Engineering Cadetships, which forms part of the JRE scheme, is not included within the scope of the audit as it is in the early stages of implementation. In 2012, funding for this scheme was approximately \$1.3 million.

Structure of the report

38. The remaining chapters in the report are:

- Chapter 2 — Program Design
- Chapter 3 — Funds Allocation and Distribution
- Chapter 4 — Review and Evaluation

2. Program Design

This chapter focuses on the implementation of key changes to the Research Block Grant program arising from the Government's Budget announcements for 2009–10. The chapter examines the work undertaken by DIISRTE in implementing these policy decisions, with a particular focus on the Sustainable Research Excellence and Joint Research Engagement schemes.

Introduction

2.1 In May 2009, the Government released its policy paper *Powering Ideas*, outlining reforms for the national innovation system and the higher education sector. Supporting these reforms, the Government announced a \$5.7 billion investment in the sectors over four years as part of the 2009–10 Budget.

2.2 A number of these initiatives directly affected the Research Block Grant program, resulting in the introduction of the new Sustainable Research Excellence (SRE) and Joint Research Engagement (JRE) schemes, including the transition of the existing Institutional Grant Scheme (IGS). Implementation of the SRE and JRE commenced in 2009, with funding commencing in January 2010.

Program implementation

2.3 The implementation and delivery of policy initiatives is one of the key responsibilities of government agencies. In recent years there has been an increasing focus on sound policy implementation and seamless delivery of policies—on time, within budget and to an acceptable level of quality.

2.4 Experience shows that optimal outcomes from policy initiatives are more likely to be obtained when there is early and systematic consideration of the practical aspects of implementation. The Department of the Prime Minister and Cabinet (PM&C) and the ANAO's Better Practice Guide, *Implementation of Programme and Policy Initiatives*, identifies a number of key elements to be considered when implementing policy, including: risk management; governance; strategy and planning; stakeholder management; resources; communication; and monitoring and review.³² Drawing on this framework, the

³² PM&C and ANAO Better Practice Guide—*Implementation of Programme and Policy Initiatives*, October 2006, Canberra, p.1.

following section focuses on an examination of the work undertaken by DIISRTE to implement the SRE and JRE schemes since their announcement as part of the 2009–10 Budget.

Implementation of the SRE scheme

2.5 The Government has committed nearly \$1.4 billion between 2009–10 and 2016–17 for the SRE scheme, to support universities in meeting the indirect costs of their research activities. After 2016–17, the SRE scheme will allocate approximately \$300 million (indexed) annually.³³ Funds provided to universities through the SRE scheme may be used to support any indirect costs associated with Australian competitive grant research.

2.6 The Government made a commitment to commence distribution of SRE funds from 2010. DIISRTE phased implementation of the scheme due to the need to trial the transparent cost process³⁴ (this work was undertaken in 2010) and to model and test the mechanism for incorporating Excellence in Research Australia (ERA) outcomes into funding allocations (this work was undertaken in 2011). Arrangements for allocating the SRE were established for 2010 and 2011 using interim measures for the Transparent Cost and ERA indices based on available data inputs. Implementation of the full funding methodology took place in 2012, at which time the scheme transitioned to business-as-usual to be managed with the five existing RBG schemes.

2.7 Table 2.1 provides a timeline for development of the SRE indices. The timeline is based on information provided by DIISRTE during development of the SRE formula.

³³ In the 2009–10 Budget, the Government committed to allocating \$300 million (indexed) annually from 2013–14. As a result of the 2012–13 Mid-year Economic and Fiscal Outlook the timeframe for realisation of this level of funding has been deferred to 2016–17.

³⁴ As outlined in Chapter 1, the transparent cost process is administered by DIISRTE and involves: a survey of university staff to quantify the effort of staff directed towards Australian competitive grant research; and, universities reporting financial data that quantifies the indirect cost of Australian competitive grant research. Data from this process is used to calculate the Transparent Cost index.

Table 2.1

Development and implementation of Sustainable Research Engagement indices, 2010–2013

2010		2011		2012		2013	
SRE component and indices, by year							
Base	Allocations based on relative share of Australian competitive grant income.						
Threshold 1	Allocations based on relative share of Australian competitive grant income ≤\$2.5m.						
Threshold 2	Allocations based on relative share of Australian competitive grant income >\$2.5m moderated by indices to recognise individual differences in the indirect costs of research between universities and to support areas of research excellence wherever they occur.						
	Interim Performance index.			ERA index.			
		Transparent Cost index.					
SRE index development, by year							
Interim Performance index	Interim measure derived from research staff full time equivalents divided by weighted publications.			ERA index implemented, replacing the Interim Performance index and incorporating ERA outcomes.			
	ERA index in development.						
ERA index	ERA in development (managed by the Australian Research Council).			2010 ERA outcomes released and applied to 2011 data.		2012 ERA outcomes released and applied to 2012 data.	
Transparent Cost index	Transparent Cost index tested.		Transparent Cost index implemented.				
	1st staff activity survey conducted.		2nd staff activity survey conducted.		Staff activity data from 2nd survey used in index.		
	Indirect cost of research financial data collected and used in index from 2011 onwards.						

Source: ANAO analysis of DIISRTE documentation.

Governance

2.8 The governance arrangements were effectively managed by DIISRTE, with well documented procedures and clear roles, responsibilities and accountabilities. The responsibilities associated with the implementation were appropriately devolved, with staff at each level aware of their respective accountabilities and obligations.

2.9 After the Government announced the SRE initiative in early 2009, DIISRTE established an experienced team—the Sustainable Research Excellence in Universities Section—to manage the implementation process. This group managed all aspects of implementation, including consultation and communication activities, and provided the key point of contact for queries and issues raised by the sector and other stakeholders.

2.10 Roles, responsibilities and accountabilities for the implementation of the SRE scheme were merged with the existing governance framework for the RBG program and the project was also subject to DIISRTE's broader corporate governance framework. Accountability and decision-making responsibilities were well established and documented in the RBG program's operations manual.

2.11 The SRE implementation received good executive support and oversight. In particular, regular reports kept the executive abreast of progress and where necessary, allowed escalation of issues for resolution. In addition, the executive played a key role in liaison with stakeholders as part of the communication and consultation activities.

2.12 The Minister was also kept informed of progress with the program, with briefings provided at key points during the implementation process. Ministerial approval was sought for release of all consultation and communication papers. Decisions relating to the calculation methodology were also referred to the Minister for approval.

2.13 In late 2009, DIISRTE established the SRE Technical Working Group (TWG) as a sub-group to the Higher Education Research Data Advisory Committee (HERDAC).³⁵ The TWG was chaired by DIISRTE and comprised representatives from each sector group and the Australian Research Council. The group was formed to provide advice on a range of technical issues in relation to the calculation of the Transparent Cost index and guidance on data collection, consultation and communications. As implementation progressed, the TWG's charter was expanded to include a broader range of SRE related issues, including integration of ERA outcomes.

³⁵ The HERDAC was established in 2009 to provide expert advice on existing and emerging data-related issues for the RBG program. It includes representation from the sector, DIISRTE, the Australian Research Council, the Department of Education, Employment and Workplace Relations and the Australian Bureau of Statistics.

2.14 The TWG had no formal decision-making capacity. However, in terms of representing the interests of stakeholders, particularly universities, the TWG provided an important accountability mechanism and a forum to negotiate an appropriate balance between the compliance burden on institutions and the data needs of the program.

Risk management

2.15 As a new scheme within an existing and well established program, the SRE was able to leverage off established elements of the RBG program. This included a strong partnership and working relationship with stakeholder groups, access to proven concepts, well defined processes and a bespoke computer system readily tailored to support the new scheme. The SRE scheme was also able to draw on skilled and experienced staff with knowledge of the RBGs and the higher education sector.

2.16 While leveraging elements of the RBG program reduced the operational risks associated with implementation of the new scheme, there were design aspects of the SRE scheme which presented new risks to the department. The calculation methodology was new, with only limited examples of similar schemes from which to draw guidance and lessons learnt. In addition, the scheme formula relied on the development of performance measures that, in turn, relied on processes that were themselves new (as with the ERA process) or yet to be developed (as with the Transparent Cost component). Successful implementation was also reliant on the active support and participation of stakeholders.

2.17 Despite these risks, there was no documentation outlining the implementation program's risk management framework. Further, there were no formal risk management processes that provided for the: documentation and assessment of risks and issues; regular tracking and monitoring of their status; and escalation of risks and issues where appropriate. The adoption of risk management processes would have provided the department with greater visibility of the risks and improved DIISRTE's ability to monitor and report against them. While DIISRTE incorporate high-level risks in the department's broader corporate risk management reporting, this did not directly support the day-to-day implementation task and associated risks.

2.18 Notwithstanding that the department did not apply a formal risk management framework, the practical actions taken by DIISRTE indicate an awareness of key risks and that steps were taken to manage and mitigate these. For instance, a key implementation risk related to data quality and stakeholder

participation in the process. Recognising this risk, in 2010, DIISRTE distributed \$20 million to eligible universities to cover additional costs arising from their participation in the transparent cost process, including the development of financial management systems, supporting documentation and administrative resources.³⁶ These funds were intended to provide an incentive for universities to participate and to facilitate better quality responses. The funds also enabled universities to take the first steps towards implementation of best practice financial and performance management frameworks in accordance with the second of the scheme's two objectives.

2.19 Data quality also presented a key risk to the accurate and fair calculation of SRE funding allocations. To mitigate this risk DIISRTE adopted an iterative approach to developing the SRE calculation methodology; with the lessons learnt and knowledge gained from the various tests and trials supporting its incremental development. This iterative approach also allowed DIISRTE to collaborate with the sector to design a data collection methodology tailored to the sector's administrative arrangements and capable of delivering data to the specified level of detail and quality. The data collection process was also supported by the design principles defined by DIISRTE at the outset of the program, aimed at balancing issues of data quality and the compliance burden placed on universities for data collection.

Implementation strategy and planning

2.20 Overall, implementation strategy and planning were effectively managed by DIISRTE. DIISRTE approached the planning activity with a high-level of openness, clearly identifying areas of uncertainty and how these would be addressed. The first task undertaken by the SRE implementation team involved planning the implementation process. This strategy was informed by work undertaken for DIISRTE by an external consultancy focusing on the indirect costs of research in relation to the transparent cost components of the methodology. DIISRTE also undertook targeted consultation with the sector, commencing with release of an issues paper in July 2009, outlining possible models and seeking feedback on a number of specific questions. Both the feedback and the consultant's report were made available on the DIISRTE website.

³⁶ Department of Innovation, Industry, Science and Research, *Sustainable Research Excellence (SRE) in Universities 2010 Guidance paper*, DIISR, Canberra, 2009, p.7.

2.21 Following on from the July 2009 issues paper, DIISRTE outlined the implementation plan for the SRE in a guidance paper released in September 2009, including details of the funding profile and a description of key milestones and deliverables. Acknowledging the iterative approach, DIISRTE also identified regular review points during the implementation to reassess the plan and to take into account new information and results from the testing and trials. The paper outlined the implementation timeline, phases, the legislative framework and stakeholder's roles and responsibilities. It also provided a clear presentation of the policy objectives of the program and demonstrated how the scheme design aligned to these. Information contained in the guidance paper provided DIISRTE with a baseline against which to manage implementation of the program.

Communication and consultation

2.22 Communication and consultation were central features of DIISRTE's implementation of the SRE scheme and a core risk mitigation strategy. To address potential issues regarding stakeholder confidence and buy-in, DIISRTE undertook an intensive and sustained program of consultation and communication. DIISRTE also established a representative technical working group to provide guidance and advice.

2.23 Recognising stakeholder engagement and buy-in as a key risk, DIISRTE focused significant effort on these activities to keep stakeholders aware of outcomes and progress, and to facilitate feedback and input. At the time of the SRE scheme's announcement, the department gave an undertaking to work closely with the sector to develop the methodology. The Minister gave a further undertaking to consult with the sector regarding the incorporation of ERA into SRE funding for 2012 and 2013.³⁷

2.24 In addition to regular communication through guidance and issues papers, DIISRTE consulted individually with each university at various points throughout the implementation, with the first round of meetings occurring in late 2009, followed by a second round of consultations in late 2010 and a final round during 2011. These meetings allowed DIISRTE to gauge views on the calculation methodology and to discuss preliminary results and funding allocations directly with the universities.

³⁷ Carr, K (Minister for Innovation, Industry, Science and Research), Universities Australia Higher Education Conference, speech, Hotel Realm, Canberra, 2 March 2011.

2.25 Interviews with stakeholders confirmed a high level of satisfaction with both the communication and consultation processes. In particular, a number of universities noted the effectiveness of the various workshops and group sessions conducted by DIISRTE. All interviewees considered the department had given sufficient opportunity to provide input and had given due consideration to their views. Overall, the communication and consultation processes associated with the implementation were effective.

Monitoring and reviewing the implementation process

2.26 The following section examines monitoring and review activities specific to the SRE implementation phase. Chapter four examines ongoing monitoring and review activities for the broader RBG program, including the SRE scheme.

2.27 The SRE methodology and funding allocations have been subject to ongoing review and evaluation by DIISRTE as part of its three-year development and implementation process. This has generally occurred when new information and data have become available and interim measures phased out, such as the interim Transparent Cost and ERA indices. DIISRTE has advised that work will continue to refine the scheme, with a number of review points scheduled over the coming years as new information becomes available and the scheme matures. In particular, the department has committed to a review of the funds allocation methodology for 2014 in light of the availability of 2012 ERA outcomes and their incorporation into the 2013 funding. DIISRTE is also currently considering a review in 2013 of the financial data collection for the transparent cost component of the methodology.

2.28 During interviews with the ANAO, a number of universities noted the degree of overlap between data reported to the Australian Research Council in relation to the ERA process, and the data reported to DIISRTE. Universities queried whether these collections could be combined, or the data shared between the organisations. In response to this feedback, DIISRTE advised the ANAO it had liaised with the Australian Research Council as part of the development of the SRE data inputs to align definitions and inputs for these collections—the Australian Research Council is also represented on the HERDAC. However, the department further advised that at this stage, it is not possible to combine these collections.

2.29 Since 2009, business plans for the Research Funding and Infrastructure Branch—which is responsible within the department for management of the RBG program and implementation of the SRE scheme—have included a

number of key performance indicators for the SRE scheme focusing on the achievement of operational objectives, such as accuracy and timeliness of the payments and the number of institutions participating in the transparent cost and ERA processes.

2.30 DIISRTE's 2012–13 Portfolio Budget Statements also included a metric for the SRE program relating to the number of universities participating in the transparent cost process—since its introduction in 2010, all 41 universities have participated in this process. Achieving participation by all universities in the transparent cost process is the first step towards achievement of the Government's objective in relation to improving universities' performance and reporting frameworks. With all universities now participating, the opportunity exists for DIISRTE to focus on the quality of data being reported through this process to encourage universities to continuously improve their administrative systems towards achievement of best practice. There is also an opportunity for DIISRTE to examine whether the financial data reported by universities as part of the transparent cost process could be used more broadly to measure the performance of universities and the achievements of the schemes.

Implementation of the JRE scheme

2.31 In announcing the JRE scheme in its policy paper *Powering Ideas*, the Government noted its aim to double the level of collaboration between Australian business, universities and publicly funded research agencies over the next decade.³⁸ It announced that the JRE would advance this aim by supporting research collaboration between universities, industry and end-users.³⁹

2.32 On 31 December 2009, the IGS scheme was discontinued and replaced by the JRE scheme, with funds for the IGS scheme diverted to the new scheme. The JRE formula contained the same weightings as the IGS scheme (60 per cent research income, 30 per cent research student load and 10 per cent research publications). However, to emphasise collaboration between universities, industry and end-users, research income category 1, Australian competitive grants, was removed from the formula.

³⁸ Australian Government, *Powering Ideas*, op. cit., p. 8.

³⁹ *ibid.*, p. 34.

2.33 Implementation of the JRE scheme was comparatively less complex than the SRE scheme implementation. With the JRE replacing an existing scheme, the impact of the new scheme on universities could be accurately modelled based on existing data. Further, implementation of the scheme required minimal system and process changes and did not require additional resources to administer. Added to this, the Government's announcement of the scheme in May 2009 provided DIISRTE with sufficient time to make the necessary changes to guidelines and legislation in preparation for the scheme's commencement in January 2010.

2.34 Due to the nature and low level of complexity associated with implementing the JRE scheme, DIISRTE did not establish a separate project team. Rather, the implementation of the scheme was managed by the team that administers the RBG program. Accordingly, planning, risk management and governance arrangements were merged with the program's existing processes.

2.35 None of the universities interviewed by the ANAO noted any issues, or dissatisfaction with the manner in which the JRE scheme was introduced and the IGS scheme closed. All university representatives interviewed stated there was no disruption to the regular payment processes as a result of this change, and advised that information and guidance was provided in a timely manner.

2.36 As mentioned in paragraph 2.20, in July 2009, DIISRTE released an issues paper for the SRE scheme seeking feedback on a number of questions. That paper also asked stakeholders whether the new JRE formula gave sufficient emphasis to end-user research and whether other strategies could be adopted to encourage collaborative research activities.

2.37 Feedback showed that a number of stakeholders considered that the JRE scheme placed too much emphasis on end-user research and that this should be addressed through other research funding initiatives. Overall, responses indicated mixed support for the new formula and whether it gave sufficient emphasis to end-user research, with responses tending to reflect university size and affiliation.⁴⁰

⁴⁰ A number of universities have formed groups over the years to present and lobby on common issues and to build inter-university cooperation and networks. These groups include: the Group of Eight, the Australian Technology Network Universities, the Regional Universities Network and Innovative Research Universities Australia. Not all universities are affiliated, with a large number of universities remaining unaligned.

2.38 In 2011, DIISRTE conducted a review of the JRE to ensure that the policy intent of the scheme was being met.⁴¹ It did this through examining the relevance and weighting of the various elements of the JRE formula. The review found support for the current elements and weightings within the JRE formula. In reporting the outcomes of this review, the department announced that it would conduct further analysis of the JRE scheme to examine the research publications measure, and the feasibility of expanding the student load measure to capture domestic and international fee-paying students.

Conclusion

2.39 DIISRTE effectively implemented the SRE and JRE schemes. Key deliverables and deadlines were achieved in accordance with both the Government's commitments and the established timeframes.

2.40 In particular, DIISRTE's implementation of the schemes was well planned, allowing for the iterative development of key components of the funding methodologies. This work was supported by consultation and communications activities aimed at both providing information and obtaining feedback at key points.

2.41 There was no formal risk management framework or process associated with the implementation of these schemes. While high-level risks were incorporated in the department's broader corporate risk management reporting, this did not directly support the day-to-day implementation task and associated risks. That said, the practical actions taken by DIISRTE indicated an awareness of key risks and steps were taken to manage and mitigate these.

2.42 In this regard, future significant changes to the program would benefit from DIISRTE adopting a documented risk management approach. Such an approach would provide the department with greater visibility of the risks and improve its ability to monitor their management.

⁴¹ This review is covered in more detail in Chapter 4.

3. Funds Allocation and Distribution

This chapter examines the administrative processes associated with calculating and distributing the Research Block Grant funds, including processes and systems for generating and validating funding amounts. It also considers the department's effectiveness in ensuring the quality of data inputs provided by universities as part of the calculation process.

Introduction

3.1 In 2012–13, the Government will provide over \$1.7 billion to the higher education sector in the form of block grants through the Research Block Grant (RBG) program. This funding is distributed via six schemes; two schemes supporting research scholarships (Australian Post-graduate Awards (APA) and the International Post-graduate Research Scholarships (IPRS)) and four schemes supporting research and research training activities (the Research Training Scheme (RTS), the Joint Research Engagement (JRE) scheme, the Sustainable Research Excellence (SRE) scheme and the Research Infrastructure Block Grants (RIBG)).

3.2 Delivery and administration of the RBG program comprises the following three key areas of activity, which will be examined in this chapter:

- Data inputs—those activities focused on data inputs to scheme formulas for calculating the RBG funding allocations. This includes data collection, data specifications and quality assurance activities.
- Calculation and distribution of funds—processes associated with the annual calculation of funding allocations for each scheme and their distribution to universities.
- Administration of the Australian Competitive Grants Register (ACGR)—activities associated with the annual update of the ACGR and its ongoing refresh and renewal.

Data inputs and collection

3.3 Funding allocations for the RBG program are calculated based on an assessment of each institution's relative performance using scheme specific formulas. Data inputs to the formulas are collected through the following:

- Higher Education Research Data Collection (HERDC)—collects data relating to each university's publications and research income

categories. Data is reported by universities at the end of each financial year. DIISRTE requires the financial data to be certified by a qualified auditor and both the publication and financial data to be certified by the university Vice-Chancellor.

- Higher Education Student Data Collection (HESDC)—collects data relating to higher degree research student load and student completions. DIISRTE requires Vice-Chancellor certification that this data is correct.
- Excellence in Research Australia (ERA) process—this process is administered by the Australian Research Council and produces ERA outcomes for each university as a measure of research excellence. This data is used by DIISRTE to derive the ERA index for the SRE scheme allocations. ERA outcomes for 2010 were the first to become available and were used to calculate the 2012 SRE funding allocations. Calculation of the ERA index for 2013 onwards will use the 2012 ERA outcomes.
- Research Hours Data Collection—data is collected via a survey of university staff to quantify the effort of staff directed towards Australian competitive grant research. This data is used to calculate the Transparent Cost index for the SRE scheme allocations. The survey is designed by DIISRTE and administered by universities. The survey was first conducted in 2010, with a follow-up survey in 2011.⁴²
- Indirect Cost Financial Return—data quantifying the indirect cost of Australian competitive grant research is reported by universities at the end of each financial year. This data is used to calculate the Transparent Cost index.⁴³

3.4 As mentioned in Chapter 1, until the introduction of the SRE scheme in 2010, data inputs to these formulas were limited to research income, research publications, higher degree research student load and higher degree research

⁴² Survey data collected in 2011 was used in the transparent costing calculations for 2012 and will also be used in 2013. The Research Hours Data Collection was not conducted in 2012, ensuring it did not overlap with the ERA process. A decision regarding the regularity and the next instance of this survey is pending.

⁴³ Indirect costs are defined as expenses that relate to goods and services which contribute to research but are not directly associated with any particular research project. Allowable cost categories include: salaries and on-costs of non-academic staff who do not undertake research; salaries and on-costs of senior academic staff with a purely administrative function who do not undertake research; costs of maintaining infrastructure, including information technology systems; finance and insurance costs; and library and support services not attributable to an individual research project.

student completions. This data is reported as part of the HERDC and HESDC data collections. Implementation of the SRE scheme resulted in the introduction of new data inputs, including ERA outcomes, staff activity data and financial data relating to the indirect cost associated with Australian competitive grant research.

3.5 The HERDC collects data relating to research income categories 1–4 and publication data. Research income data is a key contributor to the calculation of funding allocations for all schemes. As such, the data specifications for the HERDC collection are subject to considerable focus by DIISRTE as part of an annual review process.

3.6 Interviews with universities indicated that they also invest significant resources in the process of extracting, aggregating and reporting data for the RBG program each year. All interviewed universities view this as an integral part of their business operations and have taken steps to integrate the data collection process into their business processes and systems—although progress and the degree of automation varies across universities. A number of universities noted that as a by product of compiling and reporting data for the RBG program, they have access to information useful for internal management and reporting of performance and priorities across all levels of their organisation.

Data input specifications

3.7 DIISRTE invests considerable effort in ensuring the specifications for each of the above data collections are correct and can be readily understood by universities and the auditors that review and certify the returns.

3.8 Each year, DIISRTE releases an updated version of the HERDC specifications to provide guidance on the specific information to be reported. A section of the specification document identifies changes since the previous year's release. Changes to the specifications may arise as a result of:

- reviews and evaluations—since 2009, DIISRTE has conducted three reviews relating to specific aspects of the HERDC specifications.⁴⁴ Once recommended changes are endorsed by the Minister, they are implemented and documented in the draft specifications for that year;

⁴⁴ These reviews are those covered in more detail in Chapter 4 and include the 2009 HERDC, Category 2 and Category 3 and JRE reviews.

- stakeholder feedback—DIISTRE consults with stakeholders on an ongoing basis and maintains a record of issues and queries raised in relation to the data inputs and specifications. In view of their role in auditing universities, DIISRTE also consults with state Auditors-General to ensure the specifications are clear and include sufficient guidance information; and
- quality assurance checks—DIISRTE conducts quality assurance checks of data reported by universities to examine reporting patterns and to identify reporting issues.

3.9 After considering and incorporating changes from the above sources, DIISRTE releases the draft HERDC specifications to stakeholders for review and comment and briefs the Minister outlining the proposed changes. Following the consultation process, a final version of the specifications is provided to Universities Australia (UA) for endorsement via the Pro and Deputy Vice-Chancellors (Research) Committee, which comprises members from the majority of universities. Once endorsed by UA, the final specifications are published on the DIISRTE website. At the same time the Minister is informed of the final specifications.

3.10 Feedback provided by universities during interviews indicated that the reviews and quality assurance activities have improved the quality of the HERDC specifications, resulting in more accurate reporting by universities. Nearly all universities interviewed noted their preference for the earlier release of the HERDC specifications to provide sufficient time to make the necessary system and process changes.

3.11 Specification of data items for the SRE scheme has been an important element of the implementation process for this scheme. As part of this work DIISRTE conducted a trial of the SRE Research Hours Data Collection in 2010, with a second survey in 2011 focusing on increasing the comparability of the data across institutions through improvements to the reporting template and guidance information. In developing the SRE Indirect Cost Financial Return, the department worked in conjunction with the Higher Education Research Data Advisory Committee (HERDAC) and the SRE Technical Working Group to develop the reporting template and to define the indirect cost items to be reported. For the 2012 collection, the template was updated to increase clarity of reporting based on feedback from the sector and outcomes of quality assurance checks of 2011 data.

Data quality

3.12 The quality of data reported by universities is fundamental to the accurate and fair distribution of RBG funds. Data quality issues can arise as a result of unclear and inadequate data specifications, inadvertent reporting errors, or deliberate misreporting.

3.13 In recent years, DIISRTE has focused significant effort to address data quality issues and mitigate the risk this poses to the funds allocation process. This has been done through regular reviews of specific data inputs, improvements to the data input specifications and through quality assurance activities. Universities are aware that at any point their data inputs may be subject to a review, or a quality assurance exercise.

3.14 A key mechanism for assuring the quality of financial data reported by universities through the HERDC is the requirement that universities arrange for this information to be audited. In particular, the audit is required to certify that the reported research income is correct. The audit is to be conducted by an independent, external, qualified auditor who is required to produce a special purpose audit report under Auditing Standard ASA800—Special Considerations — Audits of Financial Reports Prepared in Accordance with Special Purpose Frameworks. DIISRTE also requires that each university's Vice-Chancellor certify that data reported as part of both the HERDC and HESDC are correct and accurate, and that they understand this data will be used to calculate grant amounts under the RBG program.

3.15 Relying on the auditor's and Vice-Chancellor's certifications to assure the accuracy of the data and to deter misreporting, DIISRTE conducts only limited 'real-time' checks at the time data is reported. The limited checks that are undertaken do not form part of the standard business processes and are not automated as part of the computer system that calculates funds allocation amounts.

3.16 In 2010 and 2011, DIISRTE conducted quality assurance exercises to examine the quality of research income and publication data reported by universities as part of the HERDC. This work was undertaken for DIISRTE by an external consultant and focused on analysis of data reported by a sample of universities representing different sizes and locations.⁴⁵ For each selected

⁴⁵ These reviews were not carried out as statutory audits and no audit opinion was provided. The work undertaken was different to that of a statutory audit and the conclusion from the exercises cannot be relied upon to provide the same level of assurance as an audit.

university, the consultant examined a sample of transactions and visited the university to review supporting documentation.

3.17 These quality assurance exercises highlighted a number of issues stemming from lack of clarity in the data specifications, which were addressed by DIISRTE as part of its annual review of the specifications. The exercises also identified instances of misreporting and reporting errors. In particular, the consultant's report for the 2011 exercise noted 'a number of instances where the selected income transactions may not strictly meet the definition of research or the eligibility requirements for research income'.⁴⁶ DIISRTE did not take action to follow up identified issues, or where necessary, to adjust future allocations or recover funds from universities.

3.18 There are gaps in DIISRTE's approach to data quality assurance, particularly in relation to the early identification and resolution of misreporting and reporting errors. Accordingly, there is scope for DIISRTE to implement a process which enables data to be checked as it is reported, prior to being used to allocate funds. This could be through a process of automated error checking, and would also benefit from regular quality assurance checks. An important focus would be the definition of quantitative thresholds to guide staff in determining the materiality of identified data quality issues and the appropriate course of action to address these.

3.19 Real-time checking would assist in the early resolution of issues, in particular prior to the use of this data to allocate funding. It would also assist in the identification of systematic data quality issues, and provide DIISRTE with an information base upon which to assess overall data quality and determine how issues should be managed and effort focused.

3.20 DIISRTE also lacks a strategy that describes how the various data quality activities deliver against its quality assurance objectives. Given the importance of the data as a determinant of funds allocation, and the importance of data integrity in maintaining confidence in the program, there is scope for the department to develop an overarching data quality strategy to: provide for a more systematic approach to data integrity; and underpin the consistent treatment of data quality issues. A data quality strategy could also bring within its scope reviews that focus on technical issues and allow these to be managed as part of a broader quality assurance program.

⁴⁶ McGrathNicol, *HERDC and JRE Review — Final report*, McGrathNicol Canberra, 2011, p. 3.

Recommendation No.1

3.21 To facilitate a more systematic approach to data integrity and maintain confidence in the Research Block Grant (RBG) program, the ANAO recommends that DIICCSRTE develop an overarching data quality strategy for the program.

DIISRTE's response:

3.22 *Agreed. The Department has used a variety of controls on the data collections that underpin the allocation formulae for the RBG. The ANAO has identified that they would be enhanced by incorporation into a more comprehensive, structured and formally documented quality strategy. The Department agrees that such a strategy would be beneficial to the Department's program management and commenced work to implement this recommendation during 2012.*

3.23 *The strategy will incorporate new and enhanced data handling and control measures based on effective risk management principles and will be developed in the context of the outcomes of recent Departmental reviews into its higher education data collections. It is expected that the strategy will be implemented prior to the 2014 RBG allocation process.*

Calculation and distribution of funds

3.24 The funds allocation process follows a well-defined cycle, beginning with the reporting of data by universities at the end of June and concluding in December when universities are notified of their allocation amounts for each scheme.

3.25 Data reported by universities at the end of June reflects activity for the previous calendar year and this data is used as the basis for calculating funding for the following calendar year. For example, data reported for the 2011 calendar year in June 2012 will be used to calculate funding allocations for 2013. Funds are distributed across 23 fortnightly payments commencing in January each year.⁴⁷

Research Block Grant Allocation System

3.26 The calculation of funding under the RBG program is supported by a bespoke computer system, known as the Research Block Grant Allocation

⁴⁷ For 2012, SRE Threshold 2 payments were made separately in two lump-sum payments during the year.

System (RBGAS). DIISRTE commenced developing this system in 2005 and since this time, it has gradually enhanced and expanded the system to encompass all current schemes. In addition to calculating funds allocations, RBGAS stores all data reported by universities and a range of year-specific variables used in the calculation of the allocations. This provides DIISRTE with a point-in-time record of all inputs to the funding allocations for any particular year.

3.27 Universities report HERDC data electronically using SmartForms.⁴⁸ HESDC data for each university is provided electronically by another area of the department. Data for the SRE components is reported through separate processes as part of the Research Hours Data Collection survey and the Indirect Cost Financial Return collection. Data for HERDC, HESDC and the SRE components are uploaded to RBGAS and the system automatically calculates each institution's grant allocation for the six schemes. As part of this process, the system also calculates safety-net adjustments for the RTS and JRE schemes.

3.28 DIISRTE validate the RBGAS calculations against an allocation spreadsheet. DIISRTE has maintained and updated this spreadsheet in step with the development of the RBGAS system specifically to provide a basis for data validation. DIISRTE has taken steps to ensure each system has been developed independently. The setup of the system and loading of the variables is undertaken separately and the calculation methodology for each system is different—the RBGAS system is software coded and the allocation spreadsheet is formula driven. Examination of the process of validation between the RBGAS and allocation spreadsheet calculations confirms this process is working effectively and provides a good control mechanism.

Notification of funding allocations

3.29 Once DIISRTE has finalised validation activities, universities are formally advised of their allocation amounts via email. At the same time the department advises the Minister on the outcome of the allocation process.

3.30 Universities were notified of their 2012 allocations on 15 December 2011. The email notification included details of allocated funds

⁴⁸ In 2010, DIISRTE moved to SmartForm driven data submission to allow for better control of the data submission process. The SmartForms are re-developed each year and apply basic data edits to avoid reporting errors. These errors must be addressed to allow the form to be uploaded to RBGAS.

for each scheme and directed universities to the DIISRTE website for details of allocations for all universities, as well as details of the relevant grant guidelines and Condition of Grants documentation.

3.31 All universities interviewed highlighted late notification of funding allocations as an issue and queried the time taken to formalise the allocations, particularly when data is provided by universities at the end of June. Universities emphasised their preference for earlier notification to provide time for the funds to be allocated within their institutions prior to the January commencement date. In addition, universities advised that they undertake strategic planning on a calendar year basis and conduct this activity in the July–September timeframe. Notification of funds for the following year as close to this timeframe as possible would allow for any changes to be taken into consideration at an early point, well before commencement of the funding period in January.

Distribution of funds

3.32 DIISRTE distributes RBG funding through its financial management system, Technology One. Each fortnight institutions receive a remittance advice detailing the amount to be paid, by scheme. Prior to each payment, DIISRTE conducts random checks of payment amounts against the payment schedule generated as part of the funds allocation process, to identify potential variances or errors. Each month, DIISRTE reconciles the amounts paid against the schedule of payments to confirm that all payments made were accurate.

3.33 The stakeholders interviewed by ANAO did not raise any issues about the payment process. These stakeholders advised that their payments were received on time and in line with the payment schedule.

Rollover of funds

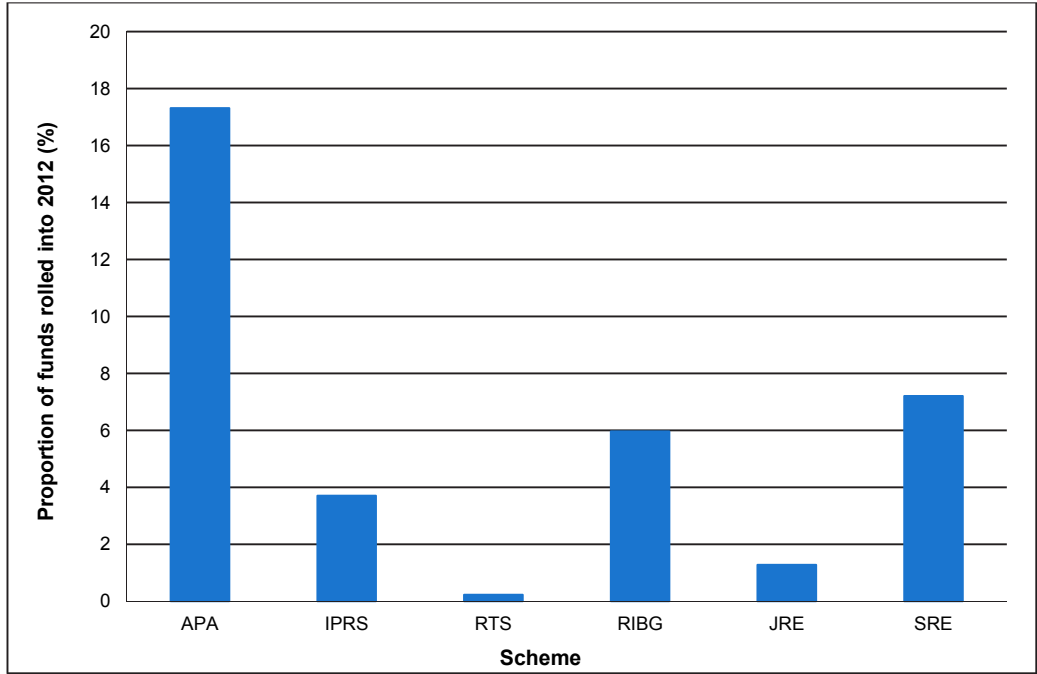
3.34 Funds under the RBGs are allocated on the condition that they are expended in the year in which they are distributed. However, recognising that circumstances may arise which prevent universities from expending the entire allocation, the HESA Act provides that universities may request a rollover of unexpended funds into the following year. To rollover funds, universities must submit a rollover request to DIISRTE by 30 June. Following examination of each rollover request, institutions are formally advised of the outcome in September–October of each year.

3.35 Universities advised that funds are generally committed to specific initiatives as part of their planning processes. However, deferral of expenditure can occur where there are delays in commencement of these initiatives, for instance, where a research project is deferred. Timing issues can also commonly occur with APA and IPRS scholarship grants, where variation in student commencement and finalisation dates and transfers to part-time study can result in delayed expenditure. In 2011, there were a number of rollover requests relating to unspent SRE scheme funding. Several universities noted that due to 2010 being the first year of funding for this scheme, methods for allocating these funds within their university were still being finalised.

3.36 Figure 3.1 shows for each scheme, the proportion of 2011 allocated funds rolled into 2012, excluding rollover amounts relating to the Commercialisation Training Scheme (CTS).

Figure 3.1

Proportion of 2011 funds rolled into 2012



Source: ANAO analysis of DIISRTE rollover data.

3.37 DIISRTE uses a risk based framework for assessing requests for rollover. This process is well documented and allows DIISRTE to assess requests consistently. Each rollover request is assessed on the basis of:

- the amount requested for rollover and the reason for under expenditure;
- the individual total grant amount from the affected scheme;
- under expenditure in previous years; and
- consistency with the university's financial statements.

3.38 If the rollover request exceeds the following rollover thresholds, DIISRTE reviews the request against a set of guidelines that assist in determining whether approval for the rollover should be granted and the proportion of funds to be rolled over. If the request is within the thresholds, the rollover request is typically processed. The rollover thresholds are:

- rollover amounts greater than 50 per cent of total grant available (including prior rollover); and
- the amount is greater than \$500 000.

3.39 The guidelines are applied on a case-by-case basis. The outcome of this analysis is documented in a minute to the General Manager, who has authority to determine what amounts, if any, of the unexpended funds can be rolled over and what conditions will apply to those funds.⁴⁹

Administration of the Australian Competitive Grants Register

3.40 A primary input to all RBG scheme funding formulas is research income, which is reported under four categories representing different sources of income. Category 1 income includes Australian competitive grants and forms the basis for distribution of all RIBG and SRE scheme funds. It also informs allocations for all other schemes except the JRE scheme. Institutions can only include income in this category for research schemes⁵⁰ that are listed on the Australian Competitive Grants Register (ACGR).

3.41 For a scheme to be listed on the ACGR, an application must be made to DIISRTE during an annual open listing period. To qualify for listing, the scheme must comply with the ACGR selection criteria by demonstrating:

⁴⁹ In 2011, delegation from the Secretary was provided to make determinations under Section 41-40 of the HESA Act for the RTS, RIBG, CTS, JRE and SRE schemes and under Section 46-35 in relation to the APA and IPRS schemes.

⁵⁰ Research schemes are defined as schemes that include an administrative process that allocates funds using a discrete set of rules.

- it is nationally competitive;
- its funds are strictly being used for research;
- it is advertised nationally and available to all universities in Australia;
- it has a well-defined selection mechanism in place, managed by a well-qualified panel;
- its funds are directly transferred from the funding agency to the higher education institution;
- the funding body agrees to provide up to date funding data to DIISRTE when required; and
- it has an annual budget of \$1 million or more (Australian Research Council, the National Health and Medical Research Council and Rural Research and Development schemes are not subject to this criterion).⁵¹

3.42 At the end of the open listing period, DIISRTE assesses all applications and distributes a draft ACGR list to universities. This provides institutions with the opportunity to identify any omitted schemes and to encourage scheme managers to submit an application. The final ACGR listing is published in January each year.

3.43 Schemes are notionally listed on the ACGR for five years. However, schemes that finish earlier and no longer disburse funds are removed. As part of an annual renewal process, DIISRTE assesses the applications of approximately 10 per cent of schemes listed on the ACGR—the schemes are randomly selected.

3.44 In 2010, DIISRTE undertook a review of the ACGR to streamline the register's administration and improve its effectiveness. The review was undertaken with the support of an advisory committee as a sub-group to the HERDAC.

3.45 The universities interviewed by the ANAO advised that they had a high level of satisfaction with the ACGR process. The universities were of the view that changes stemming from the 2010 review had improved the ACGR and that, in the absence of an alternative mechanism, the register was effective in identifying in-scope schemes for the reporting of category 1 income.

⁵¹ Department of Industry, Innovation, Science, Research and Tertiary Education, *2012 Australian Competitive Grants Register: Application for listing a competitive research funding scheme*, DIISRTE, Canberra, 2011, pp. 3–4.

3.46 The administrative processes of the ACGR are well documented in a procedures manual. The manual outlines the purpose; identifies key milestones; outlines operational requirements such as record keeping and sign-off authority; communication requirements and the scheme assessment criteria and instructions.

Conclusion

3.47 DIISRTE's process for allocating and distributing funds is generally effective and is underpinned by internal procedures for authorising and approving the allocations, and for ensuring the timeliness and accuracy of fortnightly payments. Examination of the RBGAS system shows it is fit-for-purpose, well documented and supported within the department's information technology environment. DIISRTE's management of the ACGR is also effective.

3.48 The quality of data reported by universities each year is a key determinant of the funding allocations under the program. DIISRTE monitors data quality through analysis of data issues, refinement of the data specifications, and quality assurance checks. Notwithstanding this focus, DIISRTE lacks a strategy that describes how the various data quality activities deliver against the department's quality assurance objectives. As a result, some gaps exist in the department's approach to data quality assurance, particularly in relation to the timely identification and resolution of misreporting and reporting errors. In addition, there are currently no defined quantitative thresholds to guide staff in determining the materiality of identified data quality issues and the appropriate course of action to address these.

3.49 While DIISRTE's quality assurance activities have improved the quality of data being reported by universities, there would be benefit in DIISRTE developing an overarching data quality strategy. Such a strategy would be particularly useful in view of the scale of funding distributed through the RBGs each year and the focus on the RBGs as a fair mechanism for allocating funds in line with the Government's policy objectives. A quality assurance strategy would facilitate a more systematic approach to data integrity and the consistent treatment of data quality issues. It could also bring within its scope reviews that focus on technical issues and allow these to be managed as part of a broader quality assurance program.

4. Review and Evaluation

This chapter examines work undertaken by DIISRTE since 2009 in reviewing and evaluating the Research Block Grant program. It also examines the effectiveness of the framework DIISRTE uses to evaluate the scheme and program achievements against their objectives.

Introduction

4.1 Each year, through the Research Block Grant (RBG) program, the Government provides universities with guaranteed funding based on each university's relative performance against the Government's research and research training priorities. Since May 2009, these priorities have been shaped by the Government's policy paper *Powering Ideas*. In *Powering Ideas*, the Government announced initiatives to improve research skills, expand research capacity and increase both domestic and international collaboration. The Government also sought to implement improved governance arrangements to provide for better coordination, alignment to priorities and the measurement of performance.

4.2 These reforms increased the level of funding distributed through the RBG program, and in turn, placed greater focus on the program as an equitable mechanism for allocating funds. In response to this increased focus, DIISRTE has conducted a series of reviews aimed at improving the RBG program and providing confidence in its ability to allocate funds in accordance with the Government's policy objectives.

Reviews and evaluations

4.3 A process of evaluation is generally undertaken to provide an information base to assist in improving program performance, to test whether the program has achieved its outcomes, or to ascertain whether there are better ways of achieving the program objectives. This process of review is considered essential if programs are to improve, and remain adaptive and responsive to changing environments and needs.

4.4 Since 2009, DIISRTE has undertaken a number of reviews to examine various aspects of the RBG program, including evaluation of individual schemes, examination of scheme formulas and data inputs, and examination of specific data issues. These have included:

- 2011—Review of Industry and Other Income (Category 3), and the Joint Research Engagement (JRE) scheme;
- 2010—Commercialisation Training Scheme (CTS) Evaluation;
- 2010—Review of the Australian Competitive Grants Register;
- 2010—Review of Other Public Sector Research Income (Category 2);
- 2010—International Post-graduate Research Scholarships (IPRS) Program Evaluation; and
- 2009—Review of the Higher Education Research Data Collection (HERDC).

The International Post-graduate Research Scholarships and Commercialisation Training Scheme evaluations

4.5 Of the reviews undertaken since 2009, the IPRS and the CTS evaluations have been the only ones to specifically evaluate the outcomes of the schemes against their stated objectives. The remaining four reviews focused on issues associated with scheme design and data quality.

Evaluation of the IPRS scheme

4.6 The IPRS scheme was established in 1990 to maintain and develop international research linkages. The scheme aims to support research excellence and research effort within Australia by attracting top quality international post-graduate students to areas of research strength in Australian universities. Eligible international students undertake a higher degree by research in Australia and gain experience with leading Australian researchers.

4.7 The IPRS evaluation considered the contribution of the IPRS program to the Australian Government's higher education research policy agenda and how well it was meeting its stated objectives. It also considered alignment of the program with the Australian Post-graduate Awards (APA) scheme, as well as work being undertaken on Australia's research workforce, and trends in research workforce participation by IPRS recipients.

4.8 The IPRS evaluation found that the IPRS scheme is effective and is meeting its objectives, and that it makes a significant contribution to current government policy in the area of higher education research. The analysis concluded that the quality of IPRS recipients and the research outputs they produce contributes to a high level of effectiveness in the scheme.

4.9 The review identified areas for improvement from both the university and student perspectives, with eight recommendations identified to address these. Three recommendations focused on the policy framework, including:

- opening the APAs to eligible IPRS recipients—a recommendation the Government implemented from 2011 onwards;
- further consideration be given, as part of the Research Workforce Strategy, to extending the IPRS doctorate candidature from a period of three years to three and a half years; and
- that universities ensure top quality students are attracted to areas of research strength.

4.10 In 2011, DIISRTE released the Australian Government’s research workforce strategy, *Research Skills for an Innovative Future*. As part of this strategy, the Government identified a number of future priorities including the need for an expansion of the size of the IPRS program over time. The research workforce strategy did not specifically address extension of the IPRS scholarship period.

4.11 The IPRS evaluation also made a number of recommendations aimed at ensuring the scheme continues to attract the best possible candidates and provides the necessary support arrangements for these students once they begin studying in Australia. This included improvements in the capture of student information by the universities and relevant departments in order to support further analysis and monitoring.

4.12 The evaluation noted that in order to continue to strengthen and enhance the IPRS scheme, it would be appropriate to update the existing key performance indicators (KPIs) with more outcome focused KPIs to assist in future evaluations. The report also highlighted the importance of ensuring that recommendations have been duly considered and progress monitored through a formal re-evaluation of the scheme. These recommendations were summarised as follows:

Recommendation 8: Recommend that the KPIs for the IPRS program are considered further to include an outcomes focus, and that as part of the continued monitoring of the efficiency of the program that the IPRS program be evaluated in three years time.⁵²

⁵² Department of Innovation, Industry, Science and Research, *International Postgraduate Research Scholarships (IPRS) Program Evaluation*, DIISR, Canberra, 2010, p. ix.

4.13 To date, a further re-evaluation of the IPRS scheme has not been scheduled. Further evaluation of the IPRS scheme would provide DIISRTE with an opportunity to examine the progress of universities and other relevant government agencies in responding to the IPRS review's recommendations. It would also allow DIISTRE to examine the availability of new information to support ongoing monitoring and analysis of the outcomes for the IPRS scheme.

4.14 As shown in Table 4.1, the performance indicators included in the Research Funding and Infrastructure Branch's 2012–13 business plan continue to focus on process and input measures.

Table 4.1

Research Funding and Infrastructure Branch KPIs for 2012–13

2012–13
<ul style="list-style-type: none"> • Funding provided to higher education providers verified to be accurate. • Payments under each of the RBGs made on time. • Sustain level of funding to support domestic and international students undertaking higher degrees by research in Australia.

Source: ANAO analysis of DIISRTE documentation.

4.15 While these performance indicators are more specific than the indicators contained in the branch's 2009–10 business plan (at the time the evaluation was undertaken), there remains scope for the department to develop more outcome focused performance indicators.

Evaluation of the CTS scheme

4.16 Funding for the CTS program terminated from 2011 and DIISRTE undertook the CTS evaluation in accordance with a government directive that departments evaluate all terminating programs. This review sought to determine the performance of the CTS program in terms of meeting its objectives and identify future directions relating to the development of innovation skills in higher degree research students.

4.17 The CTS scheme was established in 2007 to provide 250 higher degree research students each year with the skills necessary to bring research-based ideas to market. This was in response to an apparent lack of researchers able to enter or liaise with the commercial world. The Government provided funding for five years, with the first round commencing in January 2007. At the inception of the CTS, to avoid developing new processes to administer the new

scheme, the department chose to leverage the existing RBG program and to use the Research Training Scheme funding formula as the basis.⁵³

4.18 Overall, the evaluation found that the program was well managed within the RBG framework. However, the allocation formula, which used the RTS scheme funding formula as its basis for allocating the CTS funds to universities, did not allow for funding to be directed to universities with the highest demand, or the capability to supply and deliver commercialisation training. As a result, the funds were not directed to universities best positioned to develop courses that generated enough student interest to fully expend their allocated CTS funding.

4.19 A key recommendation of the review was that any future initiatives relating to small-scale commercialisation training should consider alternative funding mechanisms and consider a more targeted method for allocating funds, rather than relying upon the RTS funding formula.

4.20 The evaluation also highlighted deficiencies in the existing KPIs for the CTS scheme, noting these could have more closely measured the scheme's objectives. The final report recommended that a more robust set of KPIs be considered for any future initiatives in commercialisation training.

Data input reviews

4.21 Since May 2009, DIISRTE has conducted four reviews focusing on scheme formulas, and the quality of data inputs. The reviews have proved to be important mechanisms for addressing technical issues, improving the administration of the RBG program and providing confidence in the RBGs as a fair and transparent funding arrangement.

4.22 During interviews, stakeholders observed that the reviews have improved the quality of the HERDC specifications, which in turn, has reduced opportunities for misreporting of research income, or 'game playing' by universities. Universities were also complimentary of DIISRTE's work in communicating changes to the HERDC specifications stemming from these reviews.

⁵³ The scheme was designed and first implemented by the former Department of Education, Science and Training (DEST). In 2007, as part of the machinery of government changes, the administration of the CTS scheme transferred to DIISRTE.

4.23 One area of concern amongst several university representatives that were interviewed related to the Category 2 review and the Category 3 and JRE review, conducted in 2010 and 2011, respectively. Universities noted a lack of alignment between the agreed objectives for these reviews and their outcomes and recommendations.

Category 2 review

4.24 In 2010, DIISRTE examined allowable inclusions for the Category 2 ‘Other Public Sector Research Income’ component of the HERDC. This review built on the 2009 Review of the HERDC and sought to provide confidence that Category 2 income was fit-for-purpose, with reporting based on consistent and correct definitions. However, in a departure from previous reviews, DIISRTE did not consult with the sector as part of this review and did not establish an advisory committee, or similar governance arrangement to guide the review process.

4.25 At the commencement of the review, DIISRTE released an issues paper to the sector outlining the review’s context, purpose and method. In outlining the review purpose, the issues paper stated that:

A key question is whether the current classification of income sources identified is still relevant for HEPs^[54] conducting research for national, regional and local benefit. In addition to examining the definition of research used for HERDC and the Category 2 definition, the Review will explore the nature of the financial contribution of end users to reported Category 2 research income for universities; that is, what proportion of indirect costs of research are being met by end users.⁵⁵

4.26 The review resulted in a decision to allow universities to report as research income the proportion of general or untied grants received from an Australian government that can be clearly and transparently attributed to the direct costs of conducting research. As a result of this change, a small number of universities in receipt of general or untied grants increased their reported income and in turn, their funding allocations. This was offset by an equivalent reduction in funding across a larger number of universities.

⁵⁴ HEP refers to Higher Education Provider. This term is used in the relevant legislation, the HESA Act, to describe universities eligible for funding under the HESA Act.

⁵⁵ Department of Innovation, Industry, Science and Research, *Review of the Category 2 Research Income under the Higher Education Research Data Collection*, DIISR, Canberra, 2010, pp. 3–4.

4.27 While the purpose statement and terms of reference for the review indicate a broadly focused examination of category 2 income, the final analysis and findings were narrow and focused only on the issue of general or untied grants. As a result, many of the aims of the review, as outlined in the issues paper released at its commencement, were not addressed. A full examination of category 2 income in line with the original aim of the review could have provided DIISRTE with genuine insight into the sector and the impact of this policy. This would have been of particular benefit in view of the Government's decision in 2009 to refocus the Institutional Grants Scheme (IGS) into the Joint Research Engagement (JRE) scheme, and the increased emphasis this placed on category 2 income as a driver of funding allocations.

4.28 In addition, narrowing the review focus and not consulting with the sector, combined with a failure to adequately substantiate the basis for the change to the category 2 specifications as part of a final report, caused stakeholders to question the transparency of the review.

Category 3 and JRE review

4.29 In 2011, continuing its examination of research income reported as part of HERDC, DIISRTE undertook a review of the category 3 'Industry and Other Income' component. This review, referred to as the Category 3 and JRE scheme review, focused on analysis of sources of income reported under category 3 and examination of inputs and weighting of the JRE formula.⁵⁶ The review recommended no change to the JRE formula and also recommended that further analysis of the issues be undertaken as part of a future review of the scheme in 2012.⁵⁷

4.30 The review presented DIISRTE with an opportunity to examine the structure of the JRE scheme and the relevance of category 3 inputs to the achievement of the Government's intent. While elements of the review were well designed—such as the establishment of a working group, the release of a consultation paper and a call for formal submissions—the review involved limited research and analysis, constraining its potential to address these complex policy issues.

⁵⁶ The review was conducted by DIISRTE with the assistance of a working group, comprising representatives from the department and the higher education sector. At the commencement of the review, the working group collaborated on a consultation paper that sought submissions on a number of questions.

⁵⁷ DIISRTE has deferred the 2012 review of the JRE scheme, with a new commencement date and the terms of reference yet to be announced.

4.31 The review was also limited by the lack of a single, clear statement of objectives for the JRE scheme against which to frame decisions regarding the JRE scheme's structure and the inclusion, or exclusion of data inputs (this issue is discussed further in paragraphs 4.36 to 4.42).

4.32 DIISRTE undertakes these reviews with the express purpose of providing stakeholders with confidence in the RBGs as a fair funding process able to deliver funding in line with the government's policy intent. To achieve this aim, it is important that DIISRTE ensure the design and conduct of the reviews is appropriate to the task, and recommendations are supported by a final report at the conclusion of each review that summarises analysis and findings.

Performance monitoring and reporting

4.33 In *Powering Ideas*, the Government sought greater accountability and transparency, with new funding for university research to be conditional on the achievement of institutional reform, research excellence and increased collaboration.⁵⁸ To support this approach, the Government undertook to:

- Introduce mission-based funding compacts that allow universities to determine their own research and collaboration agendas in line with national priorities.
- Require universities to provide more meaningful data on research costs through activity-based reporting, and to meet specific performance targets to be developed in consultation with the sector.⁵⁹
- Implement an Excellence in Research initiative for Australia to measure the quality of university research and guide the allocation of resources.

4.34 Mission-based compact agreements have since been legislated and compacts covering the period 2011–13 have been negotiated with each university. In addition, Excellence in Research Australia outcomes for all universities are now available for 2010 and 2012 and these provide a key input to the SRE scheme introduced in 2010. Collectively, these and other information sources provide a basis from which to develop indicators and to measure performance.

⁵⁸ Australian Government, *Powering Ideas*, op. cit., p. 33.

⁵⁹ *ibid.*, p. 6.

4.35 Fundamental to this work will be the examination by the department of the existing objectives statements for the schemes to ensure they reflect the Government's goals. Also important will be the development of a performance framework that has a balance of operational and policy measures.

Program objectives

4.36 Establishing program objectives provides a basis against which outcomes can be assessed and decisions regarding a scheme's success and design can be framed. Objectives also inform funding recipients of the Government's purpose in providing funds, and enhance transparency.

4.37 The ANAO examined the objectives for the RBG schemes to determine the extent to which the objectives facilitate an assessment of outcomes required by government. This examination showed that the objectives for a number of the schemes lack specificity, making it difficult to clearly align these with the Government's specified outcomes. These issues are most evident with the \$352 million Joint Research Engagement (JRE) scheme.

4.38 When the JRE scheme was announced as part of *Powering Ideas*, the Government stated that it 'would support research collaboration between universities, industry and end-users'.⁶⁰ It also noted that 'funding for the scheme will be allocated on the basis of demonstrated research excellence and demonstrated ability to attract funding from other sources.'⁶¹ Reflecting these intentions, the HESA Act states:

The JRE scheme gives greater emphasis to end-user research by encouraging and supporting collaborative research activities between universities, industry and end-users, beyond those specifically supported by competitive grants.⁶²

4.39 The HESA Act goes on to define the high-level objectives of the JRE scheme as follows:

- Continue to support soft infrastructure;
- Continue to support the maintenance of capital items (not capital purchases); and

⁶⁰ *ibid.*, p. 33.

⁶¹ *ibid.*, p. 34.

⁶² *Other Grant Guidelines (Research) 2010*, Clause 1.30, available from <<http://www.comlaw.gov.au/Details/F2010L03010>> [accessed 10 September 2012].

- Change the way that the level of funding for each university is calculated.⁶³

4.40 Further, the department's website describes the scheme's purpose as follows:

The purpose of Joint Research Engagement (JRE) is to maintain and strengthen Australia's knowledge base and research capabilities by developing an effective research and research training system in the higher education sector.⁶⁴

4.41 In correspondence with the sector dated October 2009, DIISRTE advised that the following supporting objectives statements would be adopted for the scheme upon its commencement in January 2010.⁶⁵

Specifically, the JRE aims to:

- Support the general fabric of the research and research training activities of HEPs.⁶⁶
- Allow HEPs to manage their own research activities and set their own priorities.
- Assist HEPs to respond flexibly to their research environment in accordance with their own strategies.
- Enhance support for areas of research strength.

4.42 However, the general nature of the objectives adopted at the commencement of the JRE scheme in 2010 means that they do not provide a firm set of measures against which to assess the delivery of the three outcomes specified in government policy and the HESA Act. The three outcomes are:

- giving greater emphasis to end-user research;
- encouraging and supporting collaborative research between universities, industry and end-users; and
- demonstrated ability to attract funding from other sources.

⁶³ *ibid.*, Clause 1.32.

⁶⁴ Department of Industry, Innovation, Science, Research and Tertiary Education, *Joint Research Engagement (JRE)* [Internet]. DIISRTE, Canberra, available from <<http://www.innovation.gov.au/Research/ResearchBlockGrants/Pages/JointResearchEngagement.aspx>> [accessed 10 September 2012].

⁶⁵ The objectives statements adopted for the JRE scheme were the same as those for the previous Institutional Grants Scheme, which ceased in December 2009.

⁶⁶ HEP refers to Higher Education Provider. This term is used in the relevant legislation, the HESA Act to describe universities eligible for funding under the HESA Act.

Key performance indicators (in the Portfolio Budget Statements)

4.43 The Parliament and the public's consideration of a program's performance, in relation to impact and cost effectiveness, is improved by reliable and appropriate performance information. Adequate performance information, particularly in relation to program effectiveness, also allows managers to provide sound advice on the appropriateness, success, shortcomings and/or future directions of programs and allows for informed decisions to be made on the allocation and use of program resources.

4.44 DIISRTE's 2012–13 Portfolio Budget Statements show the RBG program as the single contributor to Program 2.1—Investment in Higher Education Research. Examination of DIISRTE's description of the components that contribute to Program 2.1 and the program's KPIs, indicate this information could be improved to more clearly show how the RBG schemes contribute to the outcomes of this program and to demonstrate whether goals are being achieved.

4.45 The objective for Program 2.1 is to increase the production of science and research knowledge. It does this through increasing research quality, transparency and accountability; and sustaining and expanding a skilled workforce in research. In describing the components that contribute to Program 2.1, reference is made to support of the higher education sector provided through the RBG schemes, however no insight is provided into how the schemes contribute to the more specific policy objectives associated with research quality, increased transparency and accountability, and development and renewal of the research workforce.

4.46 There are also inconsistencies in the description of how the various components of the programs contribute to achieving the objectives. Specifically, the RIBG and RTS schemes are identified as providing support for research, with the SRE scheme listed separately as addressing the indirect costs of research. In reality, four schemes (the RIBG, JRE, SRE and RTS) provide support for research, and it is both the SRE and RIBG schemes that specifically address the indirect costs of research. In addition, the JRE scheme is not included in the description, although the Commercialisation Training Scheme—a scheme that formally ceased in December 2011—is included.

4.47 There is also scope for further development of the KPIs and associated metrics for Program 2.1, particularly in view of new information now available as a result of the introduction of the mission-based compacts, the

commencement of the SRE and JRE schemes and the availability of ERA outcomes for each university.

4.48 DIISRTE's 2012–13 Portfolio Budget Statements define the KPIs and metrics for Program 2.1 as:⁶⁷

- Increase the research performance, transparency and accountability of Australian higher education providers
 - Ratio of funding for indirect costs of research
 - Total value of higher education providers' receipt of funds from sources other than competitive grants, including industry, community partners and public sector research agencies
 - Number of higher education providers participating in transparent costing through Sustainable Research Excellence in universities.
- Sustain the number of students completing higher degrees by research
 - Number of higher degree by research student completions.

4.49 While the objectives for Program 2.1 refer specifically to the Government's aim of increasing research 'quality', the program KPI does not specify a metric relating to research quality despite the availability of a measure of research excellence since 2010.⁶⁸ The KPI also refers to increasing 'transparency' and 'accountability', with the associated metric referring to the number of universities participating in the transparent cost exercise. Participation in this process qualifies universities for access to additional funds and accordingly, since commencement of the SRE scheme in 2010, all universities have opted to participate. DIISRTE imposes only limited conditions on universities' participation and no expectations regarding quality of data provided, or expectations regarding improvements to administrative processes. With the availability of the Transparent Cost index and the detailed financial data for each participating university underpinning this index, there exists the opportunity for DIISRTE to consider the establishment of qualifying criteria that test the quality of universities' internal management procedures.

⁶⁷ Department of Industry, Innovation, Science, Research and Tertiary Education, *Portfolio Budget Statements 2012-13*, DIISRTE, Canberra, 2012, p. 65.

⁶⁸ DIISRTE's interim performance index has been available since 2010, the 2010 ERA outcomes became available in January 2011 and DIISRTE's ERA index has been available since January 2012.

4.50 Another of the metrics refers to the total value of research income from sources other than competitive grants. This metric demonstrates increases in collaboration and income diversity, outcomes associated with the JRE scheme. However, as mentioned the JRE scheme is not listed as a contributing component to Program 2.1 and collaboration is not an outcome specified in Program 2.1’s objective statement.

4.51 In addition, variations in income received by universities from non-competitive grant sources is not in itself reflective of research collaboration or performance, particularly given the diverse nature of non-competitive grant income receipts and the potential for these receipts to be affected by other factors, such as the global financial crisis. More reliable measures of collaborative performance could be provided through the use of metrics that relate to specific income types.

Other performance indicators

4.52 For internal management purposes, DIISRTE has developed a further set of performance indicators for the RBG program, which is included in the Research Funding and Infrastructure Branch 2012–13 business plan. For 2012–13, the number of performance indicators has reduced since the previous year, and are defined at the broader program level, rather than mapped to individual schemes. Table 4.2 outlines the performance indicators for 2012–13.

Table 4.2

2012–13 Research Block Grant program performance indicators

Performance indicators
<ul style="list-style-type: none">• Funding provided to higher education providers verified to be accurate.• Payments under each of the RBGs made on time.• Sustain level of funding to support domestic and international students undertaking higher degrees by research in Australia.• By 2014, level of support for indirect costs of research funded by Australian competitive grants research approaches the international benchmark of 50 cents in the dollar.• Number of universities that participate in transparent costing in 2013.

Source: ANAO analysis of DIISRTE documentation.

4.53 The performance indicators in Table 4.2 do not address scheme outcomes and instead focus on operational objectives, or funding commitments. The \$352 million JRE and \$170 million SRE schemes were key reform initiatives, and there is merit in developing specific performance

indicators relating to these schemes, with a focus on increased research collaboration and research excellence.

4.54 Further, the performance indicators do not identify any trends, benchmarks or targets that can be measured over time. There is also scope for the department to develop outcome focused performance indicators to facilitate the measurement of performance against the overall program outcomes and scheme-specific objectives.

Recommendation No.2

4.55 To assist the department monitor and report on the performance of the RBG program and its component schemes, the ANAO recommends that DIICSRTE develop outcome focused performance indicators designed to measure performance in terms of the Australian Government's overall program outcomes and scheme specific objectives.

DIISRTE's response:

4.56 *Agreed. The Department will also be reviewing what measures may effectively capture the outcomes of the individual programs comprising the RBG. While there are difficulties in identifying outcomes solely attributable to support programs such as the RBG, the Department will take the opportunity to re-examine what system level measures, such as research impact and quality, may be suitable. It should be noted that work on directly measuring research impact is in its early stages and it is not yet clear whether it will provide robust and widely accepted methods in the short term.*

4.57 *The ANAO notes that an outcomes focus would also be usefully employed in program review activities and that existing mechanisms such as mission-based compacts could be effectively leveraged to achieve this. The Department will consider incorporating this approach in the periodic internal program review activities when they are next undertaken.*

Conclusion

4.58 Since 2009, DIISRTE has undertaken a number of reviews which have been important in addressing technical issues and providing confidence that funding is being allocated accurately. These reviews have identified insights and lessons learned that the department can draw on for future reviews. These include:

- undertaking a consistent level of stakeholder engagement throughout the process;
- developing a review methodology that reflects the nature and complexity of the issues being examined; and
- developing a final report at the conclusion of each review that summarises analysis and findings, and supports the recommendations.

4.59 These reviews have generally involved only limited analysis of scheme achievements against their objectives. This limited focus is also reflected in both the publicly available and internal performance indicators, which focus on measuring operational outcomes, such as the accurate and timely provision of funds to universities, without complementary measures related to the policy objectives.

4.60 RBGs are a key mechanism for providing funding to the higher education sector, and measuring the direct impact of this funding can be challenging. However, with \$1.7 billion in funding to be provided during 2012–13, there is scope for DIISRTE to improve its performance monitoring and reporting framework to incorporate a more outcomes focused approach.

4.61 Fundamental to developing a framework will be the establishment of an information base from which to monitor and report on the success of the schemes in achieving the Government's policy objectives. Progress has been made in this area, in particular, through development of the mission-based compacts to define performance measures and universities' individual missions, the development of ERA outcomes to provide a measure of the excellence of research activity, and the implementation of the Sustainable Research Excellence scheme to facilitate visibility of the indirect costs of research. Collectively, these and other information sources provide a basis from which to develop indicators and to measure performance.

4.62 A performance framework which has a balance of operational and outcome focused measures will both increase transparency for stakeholders and assist the department to advise government on the impact of the RBGs. A balanced framework would focus on how RBGs are contributing to the Government's reform aspirations for the higher education sector.



Ian McPhee
Auditor-General

Canberra ACT
8 April 2013

Appendices

Appendix 1: Agency's response to the proposed report

Secretary



Australian Government
Department of Industry
Innovation, Science, Research
and Tertiary Education

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Dear Dr Ioannou

Performance Audit: Administration for the Research Block Grants Program

I refer to your letter of 21 February 2013, concerning the Australian National Audit Office (ANAO) draft report on the Administration of the Research Block Grants Program (RBG).

The Department welcomes the ANAO's assessment that the Research Block Grants Program (RBG) is generally being administered effectively and that it has effectively managed the implementation of new component schemes of the RBG within the expected timeframes.

The Department accepts the two recommendations in the report: to develop an overarching data quality strategy for the program, and to develop more outcome-focused performance indicators. The adoption of the recommendations will strengthen the transparency and delivery of the program.

I acknowledge the ANAO's cooperation during the audit and the assistance provided to the Department.

Should you have any question in relation to the response, please contact Ms Clare McLaughlin, General Manager, Research Funding and Infrastructure Branch on 02 6213 6375.

Yours sincerely

Dr Don Russell

20 March 2013

1. The Department's Full Response to the Audit

The Department welcomes the ANAO's assessment that the RBG is generally being administered effectively, with sound, well documented processes and controls in place for calculating and paying of grants under the *Higher Education Support Act 2003*. In addition, the ANAO has concluded that the Department has effectively managed the implementation of new component schemes of the RBG within the expected timeframes.

Recommendation No. 1

To facilitate a more systematic approach to data integrity and maintain confidence in the Research Block Grant (RBG) program, the ANAO recommends that DIISRTE develop an overarching data quality strategy for the program.

Departmental Response

Agreed.

The Department has used a variety of controls on the data collections that underpin the allocation formulae for the RBG. The ANAO has identified that they would be enhanced by incorporation into a more comprehensive, structured and formally documented quality strategy. The Department agrees that such a strategy would be beneficial to the Department's program management and has commenced work to implement this recommendation during 2012.

The strategy will incorporate new and enhanced data handling and control measures based on effective risk management principles and will be developed in the context of the outcomes of recent Departmental reviews into its higher education data collections. It is expected that the strategy will be implemented prior to the 2014 RBG allocation process.

Recommendation No. 2

To assist DIISRTE monitor and report on the performance of the RBG program and its component schemes, the ANAO recommends that the department develop outcome focused indicators designed to measure performance in terms of the overall program and scheme-specific objectives.

Departmental Response

Agreed.

The Department will also be reviewing what measures may effectively capture the outcomes of the individual programs comprising the RBG. While there are difficulties in identifying outcomes solely attributable to support programs such as the RBG, the Department will take the opportunity to re-examine what system level measures, such as research impact and quality, may be suitable. It should be noted that work on directly measuring research impact is in its early stages and it is not yet clear whether it will provide robust and widely accepted methods in the short term.

The ANAO notes that an outcomes focus would also be usefully employed in program review activities and that existing mechanisms such as mission-based compacts could be effectively leveraged to achieve this. The Department will consider incorporating this approach in the periodic internal program review activities when they are next undertaken.

2. Summary of agency response

The Department welcomes the ANAO's assessment that the Research Block Grants Program (RBG) is generally being administered effectively and that it has effectively managed the implementation of new component schemes of the RBG within the expected timeframes.

The Department agrees with the ANAO recommendations to develop an overarching data quality strategy for the program and to develop more outcome-focused performance indicators.

The Department has commenced work on developing and documenting new and enhanced data handling and control measures for the strategy and expects to have the complete strategy fully implemented later in 2013.

The Department notes that there are inherent difficulties in identifying outcomes that are directly attributable to support programs such as the RBG, so will examine possible systemic performance indicators, especially in relation to research quality and research impact. However, it is not yet clear whether widely accepted, robust measures on quality and impact will be available for use in the near term.

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